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ABSTRACT

This report describes a 1972-73 field test regarding the development of procedures and materials for training coordinators to implement the Developing Mathematical Processes (DMP) program. DMP is a research-based, elementary school mathematics program under development at the Wisconsin Research and Development Center for Cognitive Learning. To conduct this field test, school district coordinators who would use the developmental edition of DMP Levels 1-4 (K-2) were identified, trained, and followed throughout the year. Information was also gathered from teachers on the usability of DMP materials and is included in this report. A brief summary of the 1973 and 1974 training programs for coordinators and the process of revising the Coordinators Manual are included. Changes in procedures and materials are suggested throughout the report. (Author/JBW)

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TECHNICAL REPORT NO. 296

report of the coordinators' training for large scale field testing of developing mathematical processes

JANUARY 1975

WISCONSIN RESEARCH
AND DEVELOPMENT
CENTER FOR
COGNITIVE LEARNING

Technical Report No. 296

REPORT OF THE COORDINATORS' TRAINING FOR LARGE SCALE FIELD TESTING OF DEVELOPING MATHEMATICAL PROCESSES

by

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WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

MISSION

The mission of the Wisconsin Research and Development Center for Cognitive Learning is to help learners develop as rapidly and effectively as possible their potential as human beings and as contributing members of society. The R&D Center is striving to fulfill this goal by

- conducting research to discover more about how children learn
- developing improved instructional strategies, processes and materials for school administrators, teachers, and children, and
- offering assistance to educators and citizens which will help transfer the outcomes of research and development into practice

PROGRAM

The activities of the Wisconsin R&D Center are organized around one unifying theme, Individually Guided Education.

FUNDING

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Abstract

Developing Mathematical Processes (DMP) is a research-based, elementary mathematics program currently under development by the Analysis of Mathematics Instruction project at the Wisconsin Research and Development Center for Cognitive Learning. Along with developing instructional and assessment materials and management procedures materials, the project is developing implementation materials and procedures for the training of local coordinators who in turn inservice the local teacher. Beginning in 1971 the problem of coordinators' training was analyzed and pilot materials and procedures were developed. A field test of these materials and procedures was conducted in 1972-73.

The purpose of this report is to describe the activities conducted during this field test and to describe the revisions needed in the implementation projections for coordinators. Information was also gathered from teachers on the usability of the developmental DMP materials. In addition, it contains a brief summary of the 1973 and 1974 training programs for coordinators and the process of revising the Coordinator's Manual.

The main revisions suggested by the field test were the following:

1. Coordinators should have materials in plenty of time to become acquainted with them prior to the training session.
2. The training session should be more active and more emphasis needs to be placed on assessment and management procedures.
3. The materials (slide tapes, simulated experiences) projected for use in inservices are badly needed.
4. Coordinators need support throughout the year and a maintenance conference.

The information from teachers revealed that they were extremely positive and that the children were having fun while learning and understanding mathematics.

I
Introduction

Developing Mathematical Processes (DMP) is a research-based, elementary mathematics program currently under development by the Wisconsin Research and Development Center for Cognitive Learning. As the mathematics component of the R & D Center's program of Individually Guided Education, DMP will provide a complete mathematics program for the elementary school. The program includes not only the usual topics in arithmetic, but also an informal, intuitive introduction to many ideas of geometry, statistics, and probability. DMP is based on the assumption that children learn best in an active environment where they can seek out answers to problems of interest to them. This viewpoint of the child and mathematics is summarized in the following quote from the Introduction to a DMP Teacher's Guide:

> Young children are naturally active and curious. They want to find out about the things around them and within their own world. But they do not want to be told about these things; they want to interact with the objects of their world through their senses. The DMP program gives children an opportunity to learn about their world while actively investigating and studying the mathematical aspects of their environment. You should not consider mathematics as something that happens only in a mathematics classroom. Rather, you should seek ways in which you can help children investigate the relationships of mathematics to such aspects of a school program as science, social studies, art and communication skills.

Since the DMP approach to elementary mathematics is likely to be new to many teachers, the implementation program requires inservice training conducted by a coordinator who is well versed in the rationale, pedagogy, and content of the program.

The DMP implementation program is outlined in Blueprint for the DMP Implementation Program (Romberg, McLeod, & Montgomery, 1974). This report is concerned with one part of the implementation program --the development of procedures and materials for coordinators.

The procedure for development of materials for implementation of DMP is basically the same as that used in the development of the DMP program itself. After the problem is carefully defined and analyzed, materials are developed for the pilot study. The pilot materials are tested and evaluated and, based on this evaluation, revisions are made before the materials are disseminated.

During 1971-73 the problem of training for coordinators was analyzed, pilot materials and procedures were developed, and a field test was planned for 1972-73. To conduct this field test, school district coordinators who would use the developmental edition of DMP Levels 1-4 (K-2) were identified, trained, and followed throughout the year.

This report is a description of the 1972-1973 field test activities and the revisions needed in the implementation projections. While conducting the field test, information was also gathered from teachers on the usability of the developmental DMP materials; this information is also included in this report. In addition, it contains a brief summary of the 1973 and 1974 training programs for coordinators and the process of revising the Coordinator's Manual.

II
Summer 1972 Conference

The primary activities during the spring and summer of 1972 were identifying coordinators and schools to participate in the large scale field test, planning and conducting a workshop for the coordinators, preparing a manual for the coordinators, and evaluating the workshop.

The Quality Verification section of the R & D Center had the responsibility of identifying the coordinators and schools. They identified 13 coordinators who were identified with schools in 11 states. Both multi-unit and traditionally organized schools were involved in the field test. Memoranda of agreement (see Appendix A) were drafted to explicitly describe the relationships between the Center and these coordinators who were also supported by either a university, a state department, or a school district. In turn, a memorandum of agreement was drafted to explicitly describe the relationship between the coordinator's institution and the schools or districts with which he was involved.

In addition to the coordinators identified by the R & D Center, Rand McNally and Company, the publishers of DMP, identified 11 coordinators who were responsible for schools in eight states.

Both sets of coordinators, along with other interested persons, were invited to attend a coordinators' workshop. (See Appendix B for participants.)

The conference was held at the R & D Center in Madison, from June 13 through June 15. The physical arrangements for the conference were made by the Quality Verification staff members while the DMP staff members had the primary responsibility for planning the two and one-half day program. (See Appendix B for the agenda.) Effort was made to involve a substantial number of the DMP staff members in the presentations.

One of the primary resources for the conference was the Coordinators' Manual (A Manual for DMP Coordinators, 1972). This manual outlines the coordinators' duties and gives suggestions for the four stages of DMP implementation (awareness, installation, maintenance, and refinement). DMP materials were also used; however, as the developmental versions were not ready as planned, samples of materials had to be prepared. The draft forms of the pamphlets, "An Activity Approach to Mathematics" (1972) and "Assessment and Managing Instruction" (1972), were also used.

A two phased questionnaire was developed to assist in evaluating the workshop. "Phase I: Pre-workshop Planning" was mailed to the participants prior to the conference to evaluate the preparation for the workshop. Responses from the 28 participants who returned the questionnaire are given for each of the questions.

DMP COORDINATOR WORKSHOP EVALUATION
PHASE I: PRE-WORKSHOP PLANNING

To help us evaluate our preparation for the workshop and to help us plan future workshops, we would appreciate your responses to the items below.

1. Did you receive the materials and information listed below?

A. A Manual for DMP Coordinators	Yes 23	No 5
B. Level I Teacher's Guide (Sampler)	Yes 18	No 10
C. Assessment Manual (Sampler)	Yes 11	No 15
D. DMP Sampler	Yes 19	No 8
E. Topical Outlines, Content, and Behavioral Objectives for DMP	Yes 17	No 11
F. General information sheet	Yes 13	No 13

2. Did you get sufficient information concerning arrangements for the workshop? (Accommodations, dining, agenda, etc.) Yes 17 No 8

Comments: Requests were made for maps of Madison, dining suggestions and housing arrangements. One person received no information except place and time.

3. Have you been able to arrange the planning activities listed below which are suggested on pages 5 and 6 in the Coordinator's Manual?

A. Meeting to promote teacher awareness (spring)	Yes 15	No 8
B. Funding for DMP implementation	Yes 18	No 4
C. Scheduling inservice meetings	Yes 15	No 8
D. Arranging facilities for workshops	Yes 13	No 10
E. Ordering materials	Yes 2	No 20

If you have been unable to arrange any of the above activities or have had problems in doing so, please comment:

The main concern was that of not receiving materials in time to carry out some of the planning activities, especially that of ordering materials because of lack of adequate information.

4. Do you anticipate any difficulties in completing the activities listed below?

A. Arranging summer workshop for teachers	Yes 4	No 19
B. Providing planning time for teachers	Yes 2	No 20
C. Conducting regular inservice meetings	Yes 1	No 22
D. Visiting DMP classrooms	Yes 3	No 19
E. Organizing a mid-year workshop	Yes 1	No 21

Please comment:

A few coordinators had not looked into making arrangements, but most saw no problem.

5. Have the materials you received provided adequate information concerning the following characteristics of the DMP program?

A. DMP is an activity approach to learning mathematics	Yes 22	No 3
B. DMP develops arithmetic through a measurement approach	Yes 19	No 6
C. The instructional materials are intended for use in a framework of individually guided education	Yes 21	No 3
D. DMP coordinates arithmetic, geometry and probability and statistics	Yes 21	No 3

E. The activities and content of DMP are based on research — Yes 22 No 1

Please comment:

Many felt that they had not received enough materials and could make better judgments after receiving the total package.

6. The Coordinator's Manual has provided a general idea of the schedule for implementing DMP. Have we adequately described the scheduling of the following activities?

A. Date curriculum packages should be received	Yes 12	No 8
B. Teacher workshops (by coordinator)	Yes 22	No 1
C. DMP classroom visitations (by coordinator)	Yes 21	No 2
D. Options for second semester activities	Yes 17	No 4

Comments or questions:

Of the ones who had received the manual, most replied that the manual adequately described the above. Special concerns were raised about the activities for second semester.

7. Teachers' behavior and knowledge may need to change in order to implement DMP. Do you foresee problems arising in the following areas?

A. The arithmetic content	Yes 6	No 18
B. The geometry content	Yes 2	No 17
C. The probability and statistics content	Yes 9	No 14
D. Coordination of the three content areas	Yes 8	No 15
E. The measurement approach	Yes 6	No 18
F. The activity approach	Yes 7	No 17
G. Working without textbooks	Yes 10	No 15
H. Assessment and management procedures	Yes 10	No 12
I. Others (please list)		

Comments:

One commented that it was too early to recognize many problems, several stated that there would be problems but they were still optimistic; another expressed concern that his teachers were not familiar with IGE; another felt that 3rd grade teachers would be concerned, and one felt that it would be a difficult switch for his teachers who were used to an abstract approach.

Please complete this form and bring it to the coordinators' conference on June 13.

At the close of the workshop, the questionnaire, "Phase II: Workshop Planning," was distributed and collected to evaluate the workshop and for future planning. Twenty-three participants responded; their responses are tabulated and their comments reported.

DMP COORDINATOR WORKSHOP EVALUATION
PHASE II: WORKSHOP PLANNING

To help us evaluate the DMP coordinator workshop and to help us plan future workshops, we would appreciate your responses to the items below:

1. Did we provide adequate information concerning the workshop in our communications prior to it? Yes 14 No 8

   Comments: Those participants who were identified late or who were substitutes had problems with materials arriving too late for digestion before the conference. Many were unsure about fiscal, housing and dining arrangements.

2. Did the workshop provide adequate coverage of the following?

   A. The activity approach — Yes 21 No 1
   B. The measurement approach — Yes 21 No 1
   C. The arithmetic content — Yes 21 No 2
   D. The geometry content — Yes 17 No 5
   E. The probability and statistics content — Yes 11 No 11
   F. Coordination of the three content areas — Yes 17 No 6
   G. Use of Teacher's Guide as a source of activities and suggestions — Yes 23 No 0
   H. Manipulatives and their uses in DMP — Yes 21 No 2
   I. Materials that are contained in the curriculum packages — Yes 22 No 1
   J. Materials that must be supplied by the school — Yes 22 No 1
   K. Assessment and management procedures — Yes 20 No 2

   Comments: More emphasis needed to be placed on geometry and probability and statistics and the coordination of the three areas. One commented that all was very well presented; others asked for more activities and participation.

3. Did the workshop provide adequate information concerning coordinator responsibilities in the following areas?

   A. Purpose of workshops for teachers — Yes 23 No 0
   B. Schedule of workshops for teachers — Yes 23 No 0
   C. Schedule of inservice meetings for teachers — Yes 23 No 0
   D. Observation of teachers using DMP in the classroom — Yes 20 No 3

   Comments: There were no comments.

4. Did the workshop clarify your role in the implementation of DMP? Yes 22 No 0

5. The workshop has attempted to provide information about the following terms that teachers often need to have clarified. Do you feel that the workshop has provided adequate background to explain the following processes?

   A. Equalizing — Yes 22 No 1
   B. Representing — Yes 20 No 2
   C. Validating — Yes 23 No 0

6. In the space below, tell how you would explain the process of equalizing to a teacher.

Responses varied greatly, but most seem to have an adequate concept of equalizing.

7. Do you know who to contact if you need further information? Yes 23 No 0

8. Did the workshop answer all of the questions which you had? Yes 20 No 3

If it didn't, please list your remaining questions below.

One concern was about how to inform parents of the program; another felt very uneasy about assessment and management.

9. Did the workshop meet your expectations? Yes 22 No 1

Please comment:

Overall, the participants gave highly favorable comments on the planning and execution of the workshop. It provided sufficient information about DMP, added knowledge of research, realistically discussed possible problems, and clarified the coordinator's role. The participants were impressed with the cordial R & D staff and with the relaxed atmosphere of the sessions.

Several constructive criticisms were made: seeing DMP actually being taught, central housing to encourage more interaction of participants, continuum scale on questionnaires, and more involvement by participants.

Both phases of the questionnaire indicated that the coordinators were positive about the role they had agreed to take. Several of them commented that it was too early to identify problem areas or areas in which the conference could have been stronger.

Several follow-up questions were asked on the questionnaire sent out in midwinter to the same participants and, while the reaction to the conference was still positive, additional concerns were expressed and suggestions made.

III
Fall Activities

Following the summer conference, the DMP staff members of the R & D Center were involved in follow-up correspondence such as the letter of August 16 (Appendix C) to inform coordinators of the status of the DMP materials. Due to reallocation of resources within the Center, the DMP staff was given the entire responsibility for the field test (see Appendix C, letters of August 23, and September 7, 1972).

In the fall much time was spent answering the coordinators' questions regarding the arrival date for materials, what to do until the materials arrived, and what everything was and where it was located after the materials arrived. In addition, there was correspondence with some of the coordinators in order to finalize the Memoranda of Agreement.

Information was also gathered as to specific names and addresses of schools, names of teachers, and number and level of children (see Appendix D). By fall, there were approximately 45 schools, 315 teachers, and 8,000 children who were working with the R & D coordinators; approximately 15 schools, 75 teachers, and 1,500 children were working with the Rand coordinators.

A shift of coordinators in Connecticut resulted in John Proctor being named liaison person in the Windsor-Bloomfield area. In addition, William Hoss of Killingly, Connecticut, was brought to the R & D Center for one day of training to enable him to implement DMP in Killingly Memorial Elementary School.

In October a questionnaire was sent to the R & D coordinators and another one to a sample of their teachers. The purpose of the coordinator's questionnaire was to gather information about their fall inservices. The purpose of the teacher's questionnaire was to receive their reactions to the fall inservices.

The DMP Coordinator's Evaluation was sent to the 14 coordinators. Ten responses were received. At this time one coordinator had not yet identified schools and three did not respond. The questions asked and the responses received are discussed below.

DMP COORDINATORS EVALUATION
FALL 1972

As you may recall you gave your suggestions concerning the coordinator's workshop last summer. Now that you have held inservices for your teachers, we would like some more information. We will use this to set priorities for developing and revising materials (a-v and printed) this fall and for one center of discussion at the midwinter coordinator's conference.

1. How many attended your workshops? (give approximate number; if you ran several, list the numbers separately)

   There were 15 workshops conducted by the 10 coordinators. These ran in size from 10 to 36 with the average being 18. All except

1 session included administrators and 7 sessions included aides.

2. What DMP materials did you have available? (yes or no)

Sampler 10* Activity Approach Pamphlet 8 Management Pamphlet 7 Teacher's Guides 3 Assessment Manuals 2 Pupils Materials (workbook only) 1 Physical Materials 0
*Number of coordinators who had each of the materials.

3. Were the materials you had available adequate to conduct the workshop?

Yes 1 No 9

If not, which of the above materials do you think would have been essential for the workshop?

Teacher's Guides and Assessment Manuals - 2
Physical materials - 5
Pupil materials - 1
All of the above - 4

4. In addition to the materials listed above, A-V materials have been planned. Which of these, if any, do you think would have been helpful?

Overview film 8* Slide film on Processes 7 Slide film on Activity Approach 7 Slide film on Assessment and Management 7
*Number of coordinators who thought the materials would be helpful.

5. What other materials or information would have been helpful to you in conducting the workshops?

Almost all coordinators remarked on the lack of material. Other information that they requested centered on assessment, management, how to begin DMP when an entire group is making a transition from another program, overall picture of K-3, and what to tell parents about DMP.

6. Give any specific suggestions on ways to modify the coordinator's manual to help you with this type of workshop.

Although the overall response to the manual was positive, several suggestions were made:

1. include simulated placement situations
2. include transparencies for presentations
3. more suggestions on managing materials in an IGE setting
4. activities more similar to ones used in DMP or ones which illustrate stations, processes, etc.
5. detailed instructions about managing and beginning DMP

7. Were there questions which arose during the inservice which you were unprepared to answer or lacked the information? If so, what?

Although most coordinators indicated they were prepared they were hampered by not having materials and by not having an opportunity to examine the materials. Most uncertainity was in the field of assessment and management. Questions were raised about the use of placement tests, the correct use of topic inventories, how to manage DMP in a self contained classroom, how to begin DMP in a multiunit situation and how to use an aide. Coordinators also requested more information about evaluation of DMP.

Approximately 90 teachers who were teaching DMP in the fall of 1972 were sampled randomly and asked to respond to a questionnaire, "DMP Teacher Inservice Evaluation" concerning their fall inservice. Thirty-two of these teachers completed the questionnaire. The questions and their responses are discussed below. Two other teachers returned the questionnaire but were unable to complete it since they had not been employed at the time of the fall inservice.

DMP TEACHER INSERVICE EVALUATION

During the past summer the Developing Mathematical Processes staff conducted a training workshop for coordinators who are assisting in the implementation of the DMP program. One of the coordinators' responsibilities is to conduct a workshop to introduce the DMP program to those of you who are using the materials. We want the coordinator-conducted teacher workshops to be both meaningful and helpful to DMP teachers. Your reactions to the questions below will help us evaluate our coordinator-training program and will make future teacher workshops the kind of inservice experience we anticipate them being.

1. Did you get sufficient information concerning the arrangements for the workshop? (Date, place, agenda) Yes 28 No 2

   Comments: The two who responded no were on summer vacation and did not receive notice in time.

2. What was the length of the workshop you attended?

One-day	9
Two-days	18
Other	1
No answer	1
Did not attend	1

   Comments: The one who did not attend was in summer school. Four of the nine who attended a one-day replied that it was a short session.

3. Did you do an activity during the workshop?

   Yes 22 No 5 No answer 3

   Which activity? The activities included the number patterns and polyominoes described in the coordinators manual, a graphing activity and ones from the sampler or manuals.

   Did you find this activity helpful? Yes 15 No 5 Questionable 3

   Comments: Many commented that they wish they had done more activities and more for their level. Several specifically commented that the number patterns activity was not helpful. The negative replies also commented that they listened too long and were not active enough themselves--a counter example to how they were expected to teach.

4. Did the workshop provide adequate information concerning the following characteristics of the DMP program?

   A. DMP is an activity approach to learning mathematics Yes 28 No 1
   B. DMP develops arithmetic through a measurement approach Yes 25 No 4

C. The instructional materials are intended for use in a framework of individually guided education — Yes 25 No 3
D. DMP coordinates arithmetic and geometry — Yes 27 No 2
E. The activities and content of DMP are based on research — Yes 26 No 3

Please comment:

But there was too much listening and materials were not ready.

5. Did the workshop provide adequate coverage of the following?

A. Use of Teacher's Guide as a source of activities and suggestions — Yes 13 No 12
B. Manipulatives and their uses in DMP — Yes 7 No 19
C. Materials that are contained in the curriculum packages — Yes 9 No 18
D. Materials that must be supplied by the school — Yes 16 No 10
E. Assessment and management procedures — Yes 7 No 9

Comments: Over 2/3 of those responding made some comment about how the lack of materials placed a great hindrance on the inservice.

6. Do you feel that you have an understanding of the following processes?

A. Equalizing — Yes 26 No 2 No answer 2
B. Representing — Yes 23 No 4 No answer 3
C. Validating — Yes 19 No 8 No answer 2

7. In the space below tell how you would explain the process of equalizing to a child.

About half of the respondees answered in a manner that showed they understood equalizing. The remainder either gave no answer, said it was too early to know, or responded in a vague, unclear way.

8. Have you had or do you foresee problems in any of the following areas of DMP?

A. the arithmetic content — Yes 5 No 19 No answer 4
B. the geometry content — Yes 1 No 25 No answer 4
C. the measurement approach — Yes 3 No 22 No answer 5
D. the activity approach — Yes 2 No 23 No answer 5
E. working without textbooks — Yes 2 No 23 No answer 5
F. Assessment and Management Procedures — Yes 12 No 13 No answer 5
G. Others (please list)

The time required to prepare, conduct and assess
Reading the manual
Illustrations too cluttered
Can children go ahead on their own?

Comments relative to the above areas:

A. Is there enough computation? Not enough repetition, enough drill?
B. What are sets R and S?
C. Equipment is inadequate?
E. I'm using other texts. Parents are used to books and think children are not learning.
F. Time consuming; not certain about record keeping, grouping without an

aide is impossible; difficult to keep track of individuals; a real change, but I like it.

9. Did the workshop answer all of the questions which you had? Yes 6 No 17

If it did not, please list your remaining questions below.

Many of the "No" answers also stated that they did not expect the workshop to answer all the questions. Others responded that it was too early to have many questions.

Several were still confused about where to begin and even in October felt this confusion. The main confusion was about use of all the materials and about the placement and initial groupings.

10. Do you know whom to contact if you need further information? Yes 29 No 1

Several coordinators were complimented for their enthusiasm and ability to hold a workshop under adverse circumstances.

In summary, the coordinators held the fall inservice under less than ideal circumstances and the participants were positive about many aspects. However, many were disappointed in the lack of participation and most were disappointed not having the materials so they could start immediately.

IV
Midwinter Conferences

Three midwinter conferences for DMP coordinators were held on January 23, in Chicago; January 25, in Philadelphia; and January 31, in Denver.

The purpose of the conferences was threefold: (1) to gather information from the coordinators regarding the installation of DMP in their schools, (2) to answer questions and to relate future plans, and (3) to provide an opportunity for interaction among the coordinators.

The purpose of this chapter is to serve as a record of the meetings and a guide for future meetings of this nature and to consolidate the information gained from the participants so that their suggestions, recommendations, commendations, and problems can be disseminated to the appropriate people.

Before examining the specifics of the conferences, a few overall comments are in order. At all three meetings, the response of the coordinators was positive and constructive. They are to be commended for their effort in gathering the requested information and for their astute assessment of their programs. The consensus was that, after a slow beginning due to a lack of materials and to problems with the placement procedures, the program was progressing well. The most common reactions to DMP were that the children were enthusiastic and that the teachers could see the value of developing mathematics through processes.

The organization for all three meetings was the same. Prior to the meeting, each coordinator was sent a list of questions to be discussed at the meeting. The agenda followed the topics on the list of questions and was the following:

8:30 - 10:00 A.M.
Implementation procedures and materials

10:20 - 12 Noon
Instructional procedures and materials

12:00 - 1:00 P.M.
Lunch

1:00 - 2:15 P.M.
Assessment procedures and materials

2:30 - 4:00 P.M.
Plans for next year

However, at the Philadelphia conference the order of topics was changed. The topic, assessment procedures and materials, was covered first so that more time could be spent on it.

The conference participants were coordinators who had attended the summer training conference in Madison, coordinators or other representatives who had not attended, other invited participants, and DMP and Rand McNally & Company personnel. See Appendix E for the list of participants. The attendance is summarized in Table 1.

The next section contains a summary of the responses to the Questions of Focus. These responses were gathered at all three meetings, either orally or written. One coordinator who was unable to attend sent answers and these are included here. Each question is stated in the order of the written list and appropriate responses are given. The questions are divided into three main topics: (1) implementation procedures and materials, (2) instructional procedures and materials, and (3) assessment procedures and materials.

In considering the use of these responses for revising materials, it is important to remember that some responses were contradictory. For example, if someone thought

there were too few patterns in Kindergarten, someone else thought there were too many. Also, many respondents had not been in the program long enough to answer some of the assessment and management questions.

TABLE 1
CLASSIFICATION OF THE PARTICIPANTS
OF THE THREE MIDWINTER CONFERENCES

	Chicago	Philadelphia	Denver
Coordinators who had attended the summer conference in Madison	9*	7	8*
Coordinators or representatives who had not attended the summer conference	1	3	1
Visiting college personnel	1	0	1
DMP personnel	1	1	1
Rand McNally & Company personnel	3	2	1
Total	15	13	12

* In each case, one of the listed was familiar with DMP and assisted in, rather than attended, the summer conference.

QUESTIONS OF FOCUS FOR DMP'S MIDWINTER COORDINATOR'S CONFERENCE

The following set of questions is intended for discussion at the midwinter conference.

Part I deals with your reaction to the coordinator's materials and procedures. Parts II and III require information from your teachers. (We will leave it up to you how you want to gather the information. You may want to discuss some of the questions at an inservice prior to the midwinter conference, send out questionnaires to your teachers, or gather the information informally by talking with some of your teachers.)

We are in need of some additional documents (as well as the A-V materials) for coordinators and the public and we need to look at placement procedures, but we want your suggestions. Plans are being made for the commercial editions and many of your reactions to the questions in Parts II and III will be reflected in these changes.

I. Inservice procedures and materials

A. Teachers training

1. How many times during the first semester did you meet with your teachers? What type of inservice meetings have your teachers found helpful?

The initial inservice at the beginning or prior to the beginning of school varied from coordinator to coordinator. A more complete description of this phase is described in the report of the coordinator's inservice questionnaire. Since this phase, most of the coordinators have met informally with the teachers. A few had formal sessions in which lessons were illustrated or assessment procedures were discussed. Most found it necessary to meet more often at the beginning of the year than later.

2. If you followed the workshop agendas in the manual, what changes do you recommend?

The consensus was that the teachers need to be more involved in activities. The opinion was expressed that it was crucial to have the principal in attendance. Requests were made for the slide-tapes to be available. One coordinator used a simulated activity which involved the results of placement inventories so that initial groupings could be discussed. Another created stations which involved the processes. Another suggested that any information concerning philosophy, content, etc. of the program be packaged so that a teacher could go through it at her leisure. Again, this question is discussed more fully in the report of the coordinator's inservice questionnaire.

3. Did you use the Sampler in inservice meetings? How? What changes do you recommend?

The use of the Sampler depended on the size of the group and the availability of the other materials. Some coordinators expressed the need for one document which could be discussed as a group; others recommended that this part of the inservice be held level by level. The pages should be numbered for easy reference.

4. Did you use the Activity Approach and Management and Assessment pamphlets? How? What changes do you recommend?

The Activity pamphlet was used more often than the Management one. Several expressed the opinion that they did not find the Management one to be helpful at the beginning of the year, but were going to take another look later.

5. Did you find any activities which were good in explaining DMP's approach or activity learning?

Many used the activities suggested in the coordinator's manual and found them useful. One side comment; the teachers, when polled, requested activities more related to their level in DMP.

6. What other helpful techniques did you use with your teachers during the workshops? Later?

Demonstrations by teachers. The main technique that was being used was discussion.

7. What are your plans for the remainder of the year?

"To remain on call," seemed to sum up many of the coordinators' reactions. However, many planned spring meetings to assist in the implementation next fall. Some cited problems with unions limiting the number of inservices. Still others planned to have workshops for new schools.

8. What percentage of the teachers with whom you work

a) are enthusiastic about DMP?
b) are using, with reservation, DMP?

A conservative estimate of the percentage of teachers who are enthusiastic about DMP would be 80%. It is interesting to note that those two coordinators who had teachers in the second year reported that those teachers found DMP much easier to manage the second year and were still enthu-

siastic. The reservations expressed were mainly due to the amount of preparation. (Again, the second year teachers found the preparation becoming more manageable and first year teachers often realized that the amount of time was partly due to their unfamiliarity with DMP.) Many who made comments about the preparation added that they thought the results were well worthwhile. The most anguish over preparation was when the activity was finished quickly. Some concern was expressed over the pace of Levels 3 and 4 and the postponement of computation; although more comments were favorable to DMP's approach of development through the physical to the symbolic.

- The main reasons for the enthusiasm were due to the children's positive reactions, to the use of physical materials, and to the approach which has children doing and understanding mathematics.

B. Coordinator's training

1. If a training conference for coordinators is held this summer, what changes from last summer would you recommend?

   The first and foremost comment was "let us be active." The second most prevalent suggestion was to give them a chance to see and to use the materials. Requests were also made to visit a DMP class, to see a video tape, to have an opportunity to interact with teachers, etc. using DMP, to receive the materials ahead of time, and to hold the conference later in the summer (but not on a Friday).

   More information was needed concerning the assessment and management procedures, the scope and sequence of the entire program, how to begin in Levels 2, 3, etc., the mathematical background for those not mathematically oriented, and hints for the teachers for beginning.

   As one coordinator said, "Repeat the conference of last year and add all these things."

2. What parts of the coordinator's manual have you found helpful? What changes do you recommend?

   Most coordinators found the manual adequate and helpful. They especially liked Appendices A and B.

C. Public relations

1. Have you conducted PTA or other programs? Any good ideas?

   Many had conducted sessions for parents varying from formal presentations, displays of materials and children's work, to informal visits. Parent conferences were often used as an opportunity to explain more about the program. One school had a lesson for parents and three mini-lessons for the children. This proved to be a successful session as the parents realized the level of questioning to which the children were responding.

2. What is the reaction of parents to DMP?

   Some parents were concerned with the lack of homework; others were concerned about the lack of computation. The suggestion was made that the use of games should be explained to parents. Other reactions reported were positive.

3. What would you like in an overview film?

Typical responses were: An illustration of children understanding mathematics by doing mathematics; view of all levels; some of the underlying rationale; illustrations of different types of activities and groupings with different kinds of children; personal interviews of teachers, children and parents.

4. What, other than an overview film, could DMP provide to assist you or the teachers in dealing with the public?

   a. Standardize test data
   b. Explanation of how DMP is different from other programs
   c. A list of places where the program has been tried and the results of the tryouts
   d. Results of the field tests
   e. News releases from time to time
   f. Outline of an effective presentation appropriate for a PTA program
   g. A pamphlet emphasizing the philosophy, citing program accomplishments and influence on mathematics achievement

5. Have you had any newspaper coverage? If you have and we have not seen it, would you please bring a copy?

   Several places had newspaper coverage. These will be included in the final report on installation.

6. What information do you need for school boards?

   The main requests were for standardized test data and for cost analysis and projections.

II. Instructional procedures and materials

A. Teacher's guide

1. Is the guide readable? Any suggestions for making it more usable?

   There was a split reaction to this first question, some reporting it was too detailed and confusing while others saying it was extremely easy to follow and all details were included (even problems you would encounter). The instructions for workbook pages were often not clear or complete. There were requests for putting the main ideas in outline form or to highlight main ideas in some manner.

   Other suggestions for making it more usable were to include all answers, copies of stories and the pictures, cross-reference workbook pages to activity, include list of vocabulary in each guide, make more concise and give more detail about rationale for topics and activities.

2. Within a given topic, do most teachers do all the activities? Do you find any pattern in the ones they omit?

   At first they seem to do most of the activities and then become more selective as they become accustomed to the program. Many said they were beginning to omit optional activities when they felt they were not necessary and were choosing between alternate activities.

   If there was any pattern of the ones which were being omitted, it would be those which required extensive preparation or those for which the materials had not arrived.

3. Any strong reactions to any particular activities?

Some Kindergarten teachers reported discontent with the activities which involved workbook pages; however, others expressed the opposite feeling.

Many reacted favorably to the stories and the characters (or at least said their children did).

Again, there was strong reaction to activities which required extensive preparation but only a minimum of the children's time.

Reactions specific to a given topic are reported in Appendix C.

4. Please make a list of any errors you or your teachers found, if you have not already reported them.

To make the answer to this question more usable for those revising, the specific comments or errors are listed in Appendix F.

B. Printed materials package

1. With regards to the instructional materials, have the teachers found them useful? Any suggestions on how they organized the packet (filed, put on notebook, etc.)?

Most found the materials useful but requested more efficient organization. Many had filed their own sets. Some requests were made for more instructions on the cards so they could be used independently.

2. Any reaction to the stories, pictures, cards, etc.? Would larger pictures, or colored pictures be better? etc.?

Many felt that the stories, pictures and cards were an extremely important part of the program. Again, as many reacted favorably to the length and vocabulary as those who said they tended to be too long and vocabulary was too sophisticated. For example, in two different meetings the scdizzleberry patch story was cited--once for being too long and confusing and the other time for being an example of a good story.

Overall the desire was for larger, colored pictures but the color should be used carefully. Less detail was requested in the pictures for younger children.

C. Pupil workbook

1. Any reactions to the format?

Ditto masters were requested by some teachers as were pads of the sheets rather than workbooks. Larger page numbers for younger children were requested by one teacher. Many felt a workbook of that size needed a more substantial cover. Others cut theirs apart and filed them by activities.

If there were more directions on the sheets, some teachers felt that they could be used more independently thus helping with grouping problems. Also, they felt that this would also tell parents more about the sheets sent home.

They would also like to know, when the shipping is made, how many

parts to expect for each workbook.

2. How do your teachers feel about the necessity of color?

   The overwhelming reaction was that the black and white pictures were quite adequate and that color should be avoided if it meant more expense or if any of the characters or animation was lost.

D. Physical materials

1. Any reaction to quantity, i.e., were there too many Unifix cubes, not enough containers?

   The quantity seemed adequate for most situations. The main request was for more wooden solids.

2. Any reaction to quality, i.e., do the balance beams work; do the geoboard pegs break?

   a. The wooden solids get dirty; they should be coated.
   b. Design of balances is an improvement; they should have larger cups and allow for more variance.
   c. Only a few participants said they had found broken pegs on the geoboards and several of these occurred in shipping.
   d. The smaller geometric pieces were reported to be too small for the children; also, they wanted more of the same type. Some letters are difficult to read. Also, there needs to be a better method of packaging.

3. Are there materials which should be included or excluded?

   There were several requests for play money; however, others felt this was unnecessary. The cloth bags and white sheets of paper had not often been used to this point.

   The main request was for a packing list to be included so that it would be easy to inventory the materials received.

E. Instruction

1. Approximately how much time per week is each teacher spending on DMP?

   Kindergarten teachers were spending approximately 25-30 minutes a day on DMP. The other levels spent anywhere from 30 to 60 minutes per day, the average being approximately 45 minutes. Teacher preparation time was extensive, but the teachers for the most part feel that it is necessary and worthwhile.

2. What is the average time that is being spent on each topic?

   The time varied from 1 to 6 weeks depending upon the topic, the time of year, and the familiarity of the teacher and children with DMP. As the year progressed, the teachers were moving more quickly.

III. Assessment procedures and materials

A. Placement inventories

1. Did your teachers give them and could they use the results?

The placement inventories were not used by all teachers for the following reasons: late arrival of materials, no chance of using the results for grouping, no time for assessment. Those that used them had the following comments: they were long, difficult to interpret the results, the inventory for second graders had much unfamiliar vocabulary. On the whole they found it was easier to use the results from the first grade inventory and some were satisfied with the groupings that were indicated.

2. Did any of your teachers use Form II of the placement inventories?

   There were only isolated cases of Form II being used.

3. Do you find it necessary for the tests to be printed on one side only?

   No.

4. Would you plan to use the placement inventories for students continuing in the program another year?

   The majority responded no.

B. Topic inventories

1. Are your teachers using them as pre- or post-assessment?

   The topic inventories were used mainly as post-assessment. There was some concern that the inventories were too abstract and that they were much easier than the material in the topic. It appeared that there was some lack of understanding that only the objectives that were prerequisites which needed to be mastered at that point were being tested.

C. Assessment manual

1. Is it readable and usable?

   Other than the difficulty of locating associated materials (i.e., inventory forms, record cards) and of knowing what to do with the placement results, most participants reported the manual was readable. Requests were made to organize the assessment materials so they would be more useful--i.e., put topic inventories in with topics.

D. Records

1. Which of the record devices are your teachers using?

   The group (buff) record was the most popular; however, most indicated that the individual record card was useful. There were only minor uses of the blue card.

2. Any suggestions for changes in the records?

   Make an individual record card that would cover all levels. Make a group record card that is large enough for a unit. Some of those familiar with the McBee cards requested a similar system.

E. Grouping

1. Did your teachers make initial groupings?

Some of those who gave the placement tests made initial groupings; others grouped on other criteria, and many did not group specially for math.

2. Have they regrouped their students? How often?

As the year was progressing, some were regrouping. However, many were finding most students in their initial groupings mastering the objectives and moving as a group.

3. Do they have groups of students working at different levels within a topic?

There were a few examples of this and a few examples of teachers using several topics within one group.

Comment: For the most part what was expected as far as grouping appeared to be unclear. They were overly concerned at first about the grouping and did not think they could handle many groups in one situation. We need to state our position about the possibilities and the advisability, especially for those new to the program, of grouping.

While no attempt has been made to summarize the meetings, the following is a list of recommendations that the participants saw as most pressing:

1. report of data gathered
2. scope and sequence chart for K-6; outline of content
3. data related to computational skills
4. overview film
5. description of DMP for parents
6. description of how DMP is different
7. coordinator's training to be more active
8. sample of Level 5 material before school is out should be sent to the coordinators
9. clearer description of managing DMP and individualizing within DMP
10. cost analysis and projections
11. progress report of this year's field test

V
Spring and Summer Activities

After the midwinter conference, the 1972-73 large scale field test activities were minimal. Primarily DMP staff members answered questions for coordinators, visited a few field test sites, notified the coordinators about the 1973-74 field test materials and conducted an end-of-the-year survey.

The coordinators did not have as many questions as in the fall, and those that they did have were mainly specific to a given school or situation. The more common concerns were about evaluation techniques and availability of materials for the fall. Five sites were visited: Champaign, Illinois; Monassen, Pennsylvania; Columbia, South Carolina; Houston, Texas; and Dallas, Texas. The visits consisted of observing classes and answering questions. Although many specific questions were asked and many specific comments were made, the main accomplishments of the visits were assuring the teachers that they were on the right track and, in turn, being assured that DMP was proceeding well. Correspondence with coordinators (see Appendix G) consisted of a memo enclosing copies of the Midwinter Conference report and a sample of Level 5 activities (April 17), a letter of appreciation (June 5), a memo about Level 5 (July 12), and a memo enclosing copies of recommendations for use of Placement Inventories A and C in new schools and about the enclosed results of the end-of-the-year survey (August 2).

In early May a questionnaire (1973 DMP Coordinators' End-of-the-Year Questionnaire) was sent to 30 coordinators. The purpose of this survey was to gather information about standardized tests, use of aides, coverage of topics and corresponding mastery levels, and reactions since the midwinter conferences. Twenty-two coordinators responded to the questionnaire. Their responses are discussed here.

1973 DMP COORDINATORS' END-OF-THE-YEAR QUESTIONNAIRE

At the end of the school year, we would like to have some information from you and your teachers and to give you a chance to relate any comments. Please collect the information this month and return to me during early in June. Thanks.

Mary E. Montgomery

1. If any of the schools have standardized data which is easily accessible to you and can be sent to us or if you have done any evaluation of DMP students, we would appreciate either or both.

   No results from standardized tests were reported and individual evaluations were not completed at the time. A summary of these evaluations is included in Chapter VI.

2. We need to know what aide help or other help your teachers have had.

School	Number of Teachers	Number of Aides and Amount of Time Spent With DMP	Number of Others Who Helped Regularly and Amount of Time Spent With DMP
A			
B			
C			
D			
E			

Information was collected about aide support from 159 teachers. Seventy-one of these teachers had part time aides who assisted on the average of 30 minutes a day. Two units had full time DMP aides. Seventy teachers had other assistance--student teachers, parents or older students. The amount of time they assisted varied greatly. Eighteen teachers had no assistance.

3. Enclosed are cards for teachers to indicate which topics they have covered. Please take a representative sample of your teachers (include all levels) and have them fill in the card. (The card asked for the grade level, the topics covered with each group, and approximate percentage of mastery for each topic.)

   Kindergarten teachers reported on 44 groups. The raw data may be found in Appendix H and the results are summarized in Table 2.

   First grade teachers reported on 51 groups. The raw data may be found in Appendix H and the results are summarized in Table 3.

   Second grade teachers reported on 49 groups. The raw data may be found in Appendix H and the results are summarized in Table 4.

   Several words of caution are in order when considering this information. As far as coverage, it must be remembered that the schools received the materials late and some did not get started until November; it was the first year of DMP for both the teachers and the children and it was not clear to some first grade teachers that they should get into Level 3. It must be remembered that these mastery levels are only approximations from teachers. It is not even clear how they arrived at these levels or whether they reported the average number of students who mastered all the objectives, the average number of objectives mastered within a topic or the average mastery level. However, it does show that most teachers assessed their students to be successful and it does show some mastery level trends. For example, those children in second grade who had to go back to Level 2 did not master the material as well as the first grade children.

4. Since you last responded to the Midwinter questionnaire, do you have comments about any materials or amount of materials, topics activities, or assessment materials? If so, please relate these to us.

   There were very few responses made to this question and most comments reflected the ones made on the Midwinter questionnaire.

TABLE 2
COVERAGE OF TOPICS AND MASTERY LEVELS,
DMP 1972-73 LARGE SCALE FIELD TEST, KINDERGARTENS

	Level 1														Level 2						
Topic	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	7-11
Number of Groups	41	40	41	40	39	35	33	38	34	33	28	29	26	29	5	7	7	4	5	3	2
% of Mastery	89	90	89	88	89	89	89	88	89	88	91	89	90	89	95	93	92	96	96	99	98

Other information about the number of topics

18 groups completed all 14 topics in Level 1.
The average number of topics completed was 12.
26 groups completed 12 or more topics.
13 groups completed 8-11 topics.
5 groups completed half or less of the topics in Level 1 and none in Level 2.
41 groups began with Topic 1.1; the other 3 groups began with Topic 1.3, 1.9 or 1.14.
22 groups ended with Topic 1.14; 7 more groups continued into Level 2; 2 of these completed Level 2.

Other information about mastery levels for Level 1 topics

The average mastery level was 89%.
26 groups had average mastery levels of 90% or better.
11 groups had average mastery levels of 80-89%.
5 groups had average mastery levels below 80%.
2 groups did not report mastery levels.

TABLE 3
COVERAGE OF TOPICS AND MASTERY LEVELS,
DMP 1972-73 LARGE SCALE FIELD TEST, FIRST GRADES

	Level 1														Level 2												Level 3				
Topic	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5-8
Number of Groups	3	2	4	3	3	3	2	4	3	4	3	4	4	5	48	48	48	49	49	45	48	43	46	38	38	12	3	6	2	1
% of Mastery	87	84	85	82	82	82	84	88	81	83	81	81	83	87	90	91	90	89	89	88	90	90	90	90	91	91	93	95	93	85-1

Other information about the number of topics

34 groups completed all 11 topics in Level 2.
The average number completed was 11.
38 groups completed 11 or more topics.
9 groups completed 8-10 topics.
4 groups completed 7 or less topics.
43 groups began with Topic 2.1; 1 group began with Topic 2.2; the other 7 began with Level 1--2 of which remained in Level 1.
25 groups ended with Topic 2.11; 13 groups completed 2.11 and continued to Level 3.

Other information about the mastery levels of the Level 2 topics

The average mastery level was 90%.
32 groups had average mastery levels of 90% or better.
16 groups had average mastery levels of 80-89%.
3 groups had average mastery levels of below 80%.

TABLE 4
COVERAGE OF TOPICS AND MASTERY LEVELS,
DMP 1972-73 LARGE SCALE FIELD TEST, SECOND GRADES

	Level 2											Level 3										Level 4						
Topic	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7
Number of Groups	2	2	2	1	2	3	6	3	6	3	4	47	46	48	47	47	41	45	35	28	30	5	4	9	1	1	1	0
% of Mastery	73	55	55	50	73	66	87	66	82	79	74	84	82	80	86	85	86	81	88	84	83	94	90	80	*	100	90	-

* none reported

Other information about the number of topics

24 groups completed all 10 topics in Level 3.
The average number of topics completed was $9\frac{1}{2}$.
29 groups completed 10 or more topics.
15 groups completed 7-9 topics.
5 groups completed less than 7 topics.
40 groups began with Topic 3.1; 7 groups began with Level 2; the other 2 groups began with Topic 3.2.
18 groups ended with Topic 3.10; 12 groups completed 3.10 and continued in Level 4.

Other information about the mastery levels of the Level 3 topics

The average mastery level was 84%.
22 groups had average mastery levels of 90% or better.
13 groups had average mastery levels of 80-89%.
9 groups had average mastery levels of 70-79%.
5 groups had average mastery levels of below 70%.

VI
1973-74 Activities

This chapter contains a brief discussion of the training sessions held in the summer of 1973 and the field testing during the 1973-74 school year. A detailed description of the 1974 summer training session is presented as a model for future sessions of this type. The Coordinator's Manual was revised during the spring and summer of 1974. The results of a questionnaire concerning this revised manual are reported here.

1973 Conferences and Field Testing

During the summer of 1973 conferences were held in Madison, Wisconsin, and Harrisburg, Pennsylvania, to train DMP coordinators. Approximately 65 people received this training to assist with the implementation of DMP in their school districts. The agendas used in these training sessions are included in Appendix I. Conference participants in 1972 had been asked to complete a two-part questionnaire, the results of which are summarized in Chapter II of this document. Many of the comments made by these people were helpful in planning the 1973 conferences: housing arrangements, dining suggestions, and maps of the area were provided for the 1973 participants; an effort was made by the staff to include in the 1973 meetings more information about the geometry and probability and statistics content of DMP; additional activities were planned to involve participants; and more time was allowed for interaction between staff and participants. The evaluation of these conferences is found in Appendix I.

During the 1973-74 school year the DMP large scale field test was expanded to include approximately 150 schools in 23 states. Participating in this test of materials for DMP Levels 1-5 were more than 900 teachers and nearly 25,000 children. Types of school setting varied and included suburban, urban, and non-urban. Some schools were organized as multiunit, while others were traditionally structured. Both public and private schools participated. The number of classrooms in a school building varied, as did the size of the school plant and population.

1974 Training Conferences

During August 1974 five training sessions were held for the purposes of refining the methods for training coordinators and consultants and evaluating the revision of the Coordinator's Manual. This section describes the first purpose while the next section describes the latter purpose.

On August 5-6 in Madison, Wisconsin, and on August 19-20 in Boston, Massachusetts, leadership refinement sessions were held. These sessions were for people previously trained and involved in DMP. On August 7-9 in Madison, and on August 21-23 in Boston, leadership conferences were held. These conferences, for people new to DMP, were similar to the ones held in the summers of 1972 and 1973. The fifth conference, a two-day conference for trained and new DMP people, was held in Newport Beach, California.

The agendas and the names of participants for these meetings and the evaluation of these sessions are found in Appendix J.

From the three summers of conferences the following agendas are proposed models for the training of coordinators and for the refinement of those already involved. Both agendas would need modifying to include more upper level materials when they are available.

AGENDA AND DESCRIPTORS FOR DMP LEADERSHIP CONFERENCES

Day 1

8:00 Registration and Coffee

8:30 Welcome and Introduction

(1)* 8:45 Role of DMP Coordinators and Consultants
- distinguish between coordinators and consultants
- discuss briefly the role of each in the implementation of DMP

(2) 9:00 Background of DMP
- discuss history of project and its evolution
- mention diversification of staff members' backgrounds and interests through the years--but emphasize heavily weighted with classroom teachers
- discuss philosophy of program--underlying assumptions (see Chapter 2 of Resource Manual, pp. 1-40)
  - (a) psychologically sound
  - (b) pedagogically sound
  - (c) mathematically sound

(3) 9:30 DMP Processes
- use "Child and His World" transparency--emphasize child and problem solving
- give an example of problem solving, e.g., ordering length
- talk about representing and validating ("super" processes)
- discuss and give examples of the basic processes
  - (a) describing and classifying
  - (b) comparing and ordering
  - (c) equalizing
  - (d) joining and separating
  - (e) grouping and partitioning
- or use slide tape presentation and follow this with further discussion

10:00 Break

(4) 10:15 A Look at DMP Process Through Activity
- split the participants into two groups (if more than 25)
  - (a) use activity from Coordinator's Manual on pp. 66-70 with one group
  - (b) use activity from Coordinator's Manual on pp. 75-78 with other group

(5) 11:00 DMP Materials
- concentrate on K-2 materials
- use Physical Materials Kit as a basis for discussion--show materials, illustrate examples of uses
- look at a topic from the Teacher's Guide--"talk through" guide, noting specific points which facilitate its use and which highlight program characteristics (see Ch. 5 in Resource Manual or pp. 27-31 in Coordinator's Manual)
- discuss briefly the Resource Manual (use Table of Contents)

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* The number refers to the list of materials needed for this session as found beginning on page 35.

12:00 Lunch

(6) 1:30 Overview of DMP Content
use Scope and Sequence Chart as basis for discussion
emphasize content strands--transparency T7 in Coordinator's Manual

(7) 1:45 Arithmetic Content of Topics 1-40
build presentation around processes chart and Chapters 3 & 4 of Resource Manual, Topics 1-40

2:30 Break

(8) 2:45 Geometric Content of Topics 1-40
build presentation around processes chart and Chapters 3 & 4 of Resource Manual, Topics 1-40

(9) 3:15 Workshop
use the activity "Looking at the DMP Physical Materials"
follow suggestions contained therein

4:00 Questions

6:00 Social Function

Day 2

8:00 Coffee and Questions

(10) 8:30 Content of Developmental Levels 5 & 6 (Grades 3-4)
use chapter on content from Resource Manual, Topics 40-64

(11) 9:30 Activity Approach
use DMPGO as a basis for leading into a discussion of the steps in the activity approach

10:00 Break

(12) 10:15 Activity Approach
use transparency T1 from Coordinator's Manual and discuss each of the four steps--making reference to the DMPGO activity used earlier as each step is discussed

(13) 10:45 Assessment
discuss five types of assessment in DMP and purposes of each--use transparency T11 from Coordinator's Manual
discuss where assessment information is found
emphasize Chapter 6 of Resource Manual
discuss Assessment Records
(a) topic checklist
(b) individual record cards
(c) group record cards
emphasize that assessment is for child's benefit--each child and his needs are of the utmost importance

12:00 Lunch

(14) 1:30 Inservice for Teachers (for coordinators)
stress importance of teacher inservice in implementing DMP
use two-day Workshop Agenda (p. 10 in Coordinator's Manual) as basis for discussion

discuss each part of the agenda and its importance and relevance for preparing teachers to begin DMP
use Resource Manual as an aide for discussion
keep this session informal--allow ample time for questions and sharing of ideas from group

(15) 1:30 Activities for Awareness (for consultants)
discuss briefly Awareness Sessions and the purposes thereof
explain role of consultants in conducting such sessions
do several activities suitable for Awareness meetings; e.g., Pieces, Pairs and Points or Bag Activity

2:30 Break

(16) 2:45 How to Begin in the Fall (for coordinators)
use Chapter 1 of the Resource Manual
emphasize where to begin for K, 1, 2
outline kinds of information which this chapter provides

(17) 2:45 Workshop: Planning DMP Awareness Sessions (for consultants)
divide participants into groups and have them plan hypothetical sessions (one per group) for:
(a) parents--30 min./1 hr.
(b) teachers--8 for 30 min. or 30 for 1 hr.
(c) mixed group--30 for 1 hr.
(d) mixed group--60 for 2-1/2 hrs.
(e) mixed group--30 for 1 day
(copies of 1974 results of planning sessions are included in Appendix K)

(18) 3:15 Workshop: Planning Inservice Sessions (for coordinators)
divide participants into groups according to types of inservice they will conduct
(a) half-day
(b) one-day
(c) two-day
(d) three-day
let each group discuss and plan the kinds of activities they would include in the inservice sessions
also discuss supportive role of coordinator in continual inservice work throughout school year

4:15 Questions

Day 3

8:00 Coffee and Questions

(19) 8:30 Classroom Management (for coordinators)
use Chapter 7 of Resource Manual as guide for discussing individualization
(a) within an activity
(b) within a topic
(c) between topics
discuss instructional management
(a) grouping
(b) do simulation activity from Coordinator's Manual
discuss classroom management--use Chapter 8 of Resource Manual

(20) 8:30 Group Presentations of Proposed Awareness Sessions (for consultants)
have Day 2 afternoon groups present their ideas for Awareness Sessions
discussion
questions
(copies of 1974 group recommendations are included in Appendix K)

10:00 Break

(21) 10:15 DMP in the Future
mention--
(a) plans for completion of lower and upper intermediate materials (Topics 41-90)
(b) overview film
(c) slide tapes
(d) accountability tests
(e) computer management

(22) 11:00 Evaluation of Conference
pass out conference evaluation forms to be completed before leaving
distribute Coordinator's Manual evaluation forms and envelopes
discuss briefly the feedback which is needed for evaluation report

11:15 Questions

MATERIALS FOR DMP LEADERSHIP CONFERENCES

Samples of all DMP materials
DMP materials for participants
overhead projector
16 mm projector
Salesman's Sampler Kit

Day 1

(1) Name tags, Folders, Paper, Pencils, Coordinator's Manuals, Program with agendas and participants, Cards for questions

(2) Chapter 2 of Resource Manual, Topics 1-40
"Soundness" transparencies

(3) "Child and His World" Transparencies, Process Transparencies, Slide-tape on Processes

(4) Process Activity from Coordinator's Manual (pp. 66-78) and related physical materials

(5) Topic 1, Physical Materials Kit

(6) Scope and Sequence Chart

(7) Processes Transparency
(T7 in Coordinator's Manual)

(8) Content Transparencies

(9) Physical Materials Activity and related materials

Day 2

(10) Transparencies

(11) DMPGO and related materials

(12) Steps in the Activity Approach (Transparency T1 in Coordinator's Manual)

(13) DMP Levels of Mastery (Transparency T4 from Coordinator's Manual), Five Ways to Assess in DMP (Transparency T5 from Coordinator's Manual)

(14) Coordinator's Manuals, pp. 9-24 and Appendix D, Transparency of Two-day agenda, Table of Contents of Resource Manual, (Resource Manual, if available)

(15) Bag Activity, Pieces, Pairs and Points

(16) Chapter 1 of Resource Manual

(17) Transparency of 5 types of Awareness Sessions (Paper and Blank transparencies)

(18) Paper, pencils

Day 3

(19) Copies of grouping simulation--pp. 81-82 of Coordinator's Manual, Transparency of Grouping Simulation, (Resource Manual, if available)

(20) No special materials

(21) No special materials

(22) Conference Evaluation Forms

AGENDA AND DESCRIPTORS FOR DMP LEADERSHIP REFINEMENT SESSIONS

Day 1

8:30 Coffee and Reacquaintance

(1)* 9:00 Coordinator's Manual Revised

I. Welcome
introduce everyone
get correct addresses and phone numbers

II. Purpose
bring coordinators and consultants up to date on DMP
bring DMP up to date on happenings in schools
revised Coordinator's Manual--respond to revision
time for pertinent questions
Awareness Sessions
time to "THINK DMP"

* The number refers to the list of materials needed for this session as suggested beginning on page 38.

(2) 9:15 A Look at the Commercial Version K-2
point our major revisions in format and packaging of materials
(pass out translation of old/new topics)
look at Topic 1 Teacher's Guide--"talk through" guide, noting changes
do the activity, "Looking at the DMP Physical Materials Kit"
discuss Resource Manual (Pass out Table of Contents)

10:30 Break

(3) 10:45 Content of DMP Levels 5 and 6
see content description as given in Resource Manual

11:45 Questions

12:00 Lunch

(4) 1:30 Activities for Awareness
discuss briefly Awareness Sessions and purposes thereof
do DMPGO and Pieces, Pairs, and Points Activities

2:30 Break

(5) 2:45 Planning Awareness Sessions
divide participants into groups and have them plan hypothetical sessions (one per group) for:
(a) parents--30 min./1 hr.
(b) teachers--8 for 30 min./30 for 1 hr.
(c) mixed group--30 for 1 hr.
(d) mixed group--60 for 2-1/2 hrs.
(e) mixed group--30 for 1 day
(copies of results of 1974 planning sessions are included in Appendix K)

Day 2

8:00 Coffee

(6) 8:30 Assessment and Management

I. Assessment
discuss five types of assessment in DMP and purposes of each--use transparency T11 from Coordinator's Manual
discuss where assessment information is found
emphasize Chapter 6 of Resource Manual
discuss assessment records
(a) Topic Checklist
(b) Individual Record Cards
(c) Group Record Cards
emphasize that assessment is for child's benefit--each child and his needs are of the utmost importance

II. Management
use Chapter 7 of Resource Manual as guide for discussing individualization
(a) within an activity
(b) within a topic
(c) between topics
discuss instructional management
(a) grouping
(b) do simulation activity from Coordinator's Manual
discuss classroom management--use Chapter 8 of Resource Manual

(7) 9:30 Discussion of Awareness Session
have Day 1 afternoon groups present their ideas for Awareness Sessions
discussion
questions
(copies of 1974 group recommendations are included in Appendix K)

10:45 How to Begin DMP in the Commercial Version
use Chapter 1 of Resource Manual as a guide

11:00 New Developments in DMP
Mention--
accountability tests
computer management
overview film
slide tape
plans for completion of Topics 41-90

11:45 Evaluation of Coordinator's Manual
pass out evaluation form and envelopes
discuss briefly feedback which is needed for evaluation report

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MATERIALS FOR LEADERSHIP REFINEMENT SESSIONS

(1) Name tags, Folders, Paper, Pencils, Coordinator's Manuals, Programs with agendas and participants, Cards for questions

(2) Topic 1, Physical Materials Kit, Resource Manual Table of Contents, Materials Activity, Aunti Duck's Game/Dice, Translation old/new topics, Transparencies on Materials

(3) Transparencies

(4) DMPGO--rulers, graph paper, Grid Transparency, Bag Activity--bags, Pieces, Pairs, and Points--copies of Activity, Geometric pieces, Transparencies

(5) Transparency--5 types of sessions; Paper, scissors, blank transparencies, pens

(6) Assessment Transparencies, copies of Record Cards, Grouping simulation, (Resource Manual if available)

(7) Agendas from groups

(8) Chapter 1 of Resource Manual

(9) Scope and Sequence Chart

Revision and Evaluation of DMP Coordinator's Manual

In June 1974, the DMP Coordinator's Manual was revised. An experienced coordinator from New York who had supervised the implementation of DMP in a number of schools in his area and had worked closely with many of the teachers in these schools was brought to the Research and Development Center to help in the revision. Two DMP staff members assisted in the revision process.

The revised Coordinator's Manual became the nucleus for the planning and organization of the 1974 Coordinator's Conferences in Madison and Boston. Specific references were made throughout the conferences to the pertinent

sections of the manual. Many of the activities used with the coordinators were those recommended in the manual for inservice work with teachers. At the conclusion of each conference, forms on which to evaluate the revised Manual were distributed. Each participant was asked to study the Manual carefully and, after having an opportunity to use the guide in conducting initial implementation activities with teachers, to return the evaluation form. Approximately 83 forms were distributed. Of this number, 25 were returned. Results were tabulated and are summarized below.

DMP COORDINATOR'S MANUAL EVALUATION

1. Are the stages of the DMP implementation program explained satisfactorily? Yes 24 No 1

   Comments: Most respondents felt the implementation program was explained satisfactorily, although one person believed that the Manual was received too late to be helpful this year.

2. Is the role of the coordinator explained satisfactorily by the Coordinator's Manual? Yes 23 No 2

   Comments: Coordinators believed their role was explained satisfactorily. Several remarked that variables dependent on a local situation prohibited giving more than a general explanation in the Manual. One person felt that the role of the coordinator in the refinement stage could be expanded somewhat, but did not elaborate to indicate how.

3. Are there additional coordinator's duties and responsibilities which should be included and explained? Yes 8 No 13

   Comments: Four respondents felt it was too early in the school year to determine their response to this question. Most believed the duties and responsibilities are adequately explained. More direction was requested regarding how the coordinator can fulfill all responsibilities while only working part-time. The supportive role of the coordinator should be emphasized, and a statement should be included which delineates duties and responsibilities of persons other than the coordinator. One individual recommended that the coordinator's duties be expanded to include working in the classroom with students.

4. The Coordinator's Manual encourages the importance of emphasizing "desired teacher behaviors" in the workshop for teachers. Is adequate information provided for this important area? Yes 20 No 3

   Comments: Nearly all of the coordinators who returned their evaluation forms felt adequate information is provided, although several suggestions were offered. More emphasis in the training sessions should be placed on the uses of probing questioning techniques with specific references to the DMP Teacher's Guides. Video tapes or films of teachers

exhibiting desired behaviors would be beneficial. Section III (Conclusion) of Appendix C might be expanded to include suggestions of ways experienced coordinators used the teacher objectives without implying that teachers have been doing everything wrong. One respondent expressed the feeling that each individual coordinator should have unique personal experiences and beliefs to bring to this aspect of the workshop; the Manual provides enough direction with just the right amount of prescription.

5. The Coordinator's Manual states the following: "The coordinator plays an important role in identifying and implementing appropriate refinement techniques as well as evaluating their effectiveness." Are these refinement and self-maintenance techniques adequately explained in the manual? Yes 23 No 1

   Comments: Most coordinators believed that refinement and self-maintenance techniques are explained adequately. One person felt it was too soon to evaluate this section. Another felt that additional activities or services of the R&D Center should be made available to coordinators if unanswered questions arise.

6. Are there additional refinement and self-maintenance techniques which should be included in this manual? Yes 5 No 9

   Comments: A number of coordinators did not respond to this question. Several indicated they could not comment until they were more experienced in working with the program.

7. Is the role of the coordinator in the process of change sufficiently defined and described? Yes 24 No 1

   Comments: As indicated, there was general agreement on the sufficiency of this section of the Manual. General feeling was that the section is well done. One respondent liked the emphasis on the position approach and the suggestions of how to deal with teachers.

8. Are the DMP teacher objectives realistic, important and necessary? Yes 23 No 0

   Comments: Reactions to the teacher objectives were favorable though one coordinator termed them "idealistic." Another felt the objectives will be difficult for some teachers to attain.

9. Is the format and arrangement of the Manual satisfactory? Yes 23 No 2

   Comments: Coordinators liked the format and arrangement of the Manual, but one person suggested that the evaluation materials should be provided in a form which can be duplicated. Another indicated that more information on assessment and management should be included.

10. Are the appendices adequate in what they supply and the quality given? Yes 19 No 3

Comments: Though general reaction to the appendices was favorable, several respondents commented on the need for revision of the transparency masters in Appendix F to make them visually more appealing. Transparency T6 was cited as needing revision so that less information is presented. One coordinator suggested that a topic sequence chart be included as one of the transparencies as well as sample assessment documents.

11. Should more simulated activities be included in any area? Yes 9 No 14

Comments: Respondents suggested the inclusion of more activities for the initial session--perhaps an additional grouping activity and some type of assessment simulation. Several suggested more activities in all areas, reasoning that one can never have too many from which to choose. One individual requested more activities which might be useful in Awareness Sessions.

12. The Coordinator's Manual presents several activities (Appendix C) which may be used with teachers during the workshop. Are these activities adequate? Yes 21 No 1

Comments: Though most coordinators who completed this section felt that the number of workshop activities is adequate, it was suggested that more be added which use a small number of objects and which are of the "non-threatening" type like DMPGO.

13. Is the role of the coordinator during the second- and third-year operation (expansion and refinement) adequately defined? Yes 14 No 3

Comments: Most respondents believed the second and third year role of the coordinator is adequately defined, although a few commented that it was not possible for them to decide yet.

14. Additional Comments:

Sample additional comments made by the coordinators are:

"The Manual should be very helpful--however, after I have tried to find the answer to a problem that develops in a presentation I will be able to give a much better assessment."

"I think it's excellent. The language is clear and specific."

"Coordinator training might involve actual interaction between coordinator and children so the coordinator can sense the flavor of the program."

"For planning the inservice I found the Manual quite helpful, yet with it alone, it would have been inadequate. A considerable amount of the presentation depended upon the background sessions at the R&D Center. The Manual helped in organization as well as activities and overlays."

"I feel the Manual is well organized, easily understood, and satisfactory in terms of information. However, it may have been helpful to have a copy of the Resource Manual available when reading it. Lacking experience and knowledge about the program, at this point in time, I find it difficult to offer many constructive suggestions."

"With the additional information included from the follow-up conferences I think any coordinator willing to do the work suggested in the Coordinator's Manual should do an excellent job of implementation and maintenance of DMP."

VII
Summary

The purpose of this report was to describe the activities of the field test conducted in order to do a formative evaluation of the procedures and materials for training coordinators and to suggest the revisions needed in these procedures and materials.

In summary, the activities of 1972-73 consisted of the summer workshop, support from Center staff during the year, and the midwinter conferences. Formative evaluation of the summer workshop was gathered through questionnaires and interviews at the midwinter conference. Formative information about the inservices conducted for teachers, administrators, and aides was also gathered on questionnaires from both the coordinators and participants and by interviews at the midwinter conference. The midwinter conferences also provided information about the installation of DMP in the schools as well as about the developmental materials for Levels 1-4.

Changes in procedures and materials are suggested throughout the report, but the main revisions suggested by the field test are:

1. coordinators should have materials in plenty of time to become acquainted with them prior to the training session;
2. the training session should be more active and more emphasis needs to be placed on assessment and management procedures;
3. the materials (slide tapes, simulated experiences) projected for use in inservices are essential; and
4. coordinators need support throughout the year and a maintenance conference.

From the information gathered from teachers through questionnaires and through visits it was found that on the whole attitudes were very positive. The children progressed well through DMP considering the date of arrival of materials and the newness of the program. An overriding reaction was that the children were having fun and also learning. The teachers, as well as the coordinators, offered many constructive criticisms which will be reflected in the revisions for the commercial edition of the K-2 materials.

Statements similar to those of 1972 reflect the reaction to the training programs in 1973 and 1974. Although not as extensive, an evaluation was conducted during the 1973-74 school year, the surveys indicated findings similar to 1972-1973. The training programs in the summer of 1974 were reviewed quite favorably by the attendees as were the revisions of the Coordinator's Manual.

References

1. An activity approach to Math: A pamphlet for teachers of DMP. Experimental Edition, Wisconsin Research and Development Center for Cognitive Learning, Madison, 1972.

2. Assessment and managing instruction: A pamphlet for teachers of DMP. Experimental Edition, Wisconsin Research and Development Center for Cognitive Learning, Madison, 1972.

3. Developing Mathematical Processes, Level One, Teacher's Guide. Developmental Edition, Wisconsin Research and Development Center for Cognitive Learning, Madison, 1972.

4. A manual for DMP coordinators. Draft edition, Wisconsin Research and Development Center for Cognitive Learning, Madison, 1972.

5. Romberg, T. A., McLeod, D., & Montgomery, M., Blueprint for the DMP implementation program, Working Paper 74, Wisconsin Research and Development Center for Cognitive Learning, Madison, 1974.

Appendix A
Memoranda of Agreement

1. between Center and University
2. between Center and State Department of Education
3. between Center and School District
4. between University or State Department and School District

MEMORANDUM OF AGREEMENT

BETWEEN

THE WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

AND

THE _____(UNIVERSITY)

The Wisconsin Research and Development Center for Cognitive Learning (Center) and the _____ (University) agree during the 1972-73 school year to cooperate in a field test of the Developing Mathematical Processes (DMP) Coordinators Inservice Program, and to implement DMP curriculum products in selected school districts.

A. The Center agrees to:

1. Provide inservice to the DMP Coordinator in a two and one-half day conference in June, 1972.

2. Provide travel and lodging expenses for the DMP Coordinator during the conference.

3. Provide the following materials, (one for each participating adult) for the DMP Coordinator to use in the District:
   "An Activity Approach to Math"
   Project Paper: Topical Outlines, Content and Behavioral Objectives for the DMP Program
   "Assessment and Managing Instruction"
   Topic 2.9 Sampler

4. Provide a one-day mid-year inservice session in a mutually convenient site for the DMP Coordinator in January, 1973 at Center expense.

5. Respond to inquiries from the DMP Coordinator related to the implementation of DMP.

49

6. Provide a complete package of DMP printed materials to the Coordinators as specified in Manual for DMP Coordinators. In addition, provide a sample kit of manipulatives.

B. The University agrees to select and support _____ as DMP Coordinator and ensure that this Coordinator:

1. Receives inservice training from the Center relative to the implementation of DMP.

2. Obtains a signed agreement from each school district implementing the DMP program concerning the conditions specified in the sample memorandum of agreement attached. Copies of such fully executed agreements shall be forwarded to the Center prior to September 1, 1972.

3. Provides DMP inservice training to the district(s).

4. Supports the implementation of the DMP program as prescribed in the Manual for DMP Coordinators.

5. Responds to inquiries from the district(s) related to the implementation of DMP.

6. Provides evaluative data to the Center upon request related to the effectiveness of the DMP program. Such data may include DMP Coordinator opinion, teacher performance objectives, or implementation objectives. Such requests will be no more frequent than four times a year.

C. The terms of this agreement shall be in force from the time it is fully executed through June 30, 1973, and will continue thereafter for one year subject to mutual agreement by the parties.

Agreed to:

_____

William R. Bush, Deputy Director
Wisconsin Research and Development Center

_____

Date

Agreed to:

_____

Name

_____

Date

MEMORANDUM OF AGREEMENT

BETWEEN

THE WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

AND

THE _____ STATE DEPARTMENT OF EDUCATION

The Wisconsin Research and Development Center for Cognitive Learning (Center) and the _____ (SDE) agree during the 1972-73 school year to cooperate in a field test of the Developing Mathematical Processes (DMP) Coordinators Inservice Program, and to implement DMP curriculum products in selected school districts.

A. The Center agrees to:

1. Provide inservice to the DMP Coordinators in a two and one-half day conference in June, 1972.

2. Provide travel and lodging expenses for the DMP Coordinator during the Conference.

3. Provide the following materials, (one for each participating adult) for the DMP Coordinator to use in the District:
   "An Activity Approach to Math"
   Project Paper: Topical Outlines, Content and Behavioral Objectives for the DMP Program
   "Assessment and Managing Instruction"
   Topic 2.9 Sampler

4. Provide a one day mid-year inservice session in a mutually convenient site, for the DMP Coordinator in January, 1973 at Center expense.

5. Respond to inquiries from the DMP Coordinator related to the implementation of DMP.

51

6. Provide a complete package of DMP printed materials to the Coordinators as specified in Manual for DMP Coordinators. In addition, provide a sample kit of manipulatives.

B. SDE agrees to select and support _____ as DMP Coordinator and ensure that this Coordinator:

1. Receives inservice training from the Center relative to the implementation of DMP.

2. Obtains a signed agreement from each school district implementing the DMP program concerning the conditions specified in the sample memorandum of agreement attached. Copies of such fully executed agreements shall be forwarded to the Center prior to September 1, 1972.

3. Provides DMP inservice training to the district(s).

4. Supports the implementation of the DMP program as prescribed in the Manual for DMP Coordinators.

5. Responds to inquiries from the district(s) related to the implementation of DMP.

6. Provides evaluative data to the Center upon request related to the effectiveness of the DMP program. Such data may include DMP Coordinator opinion, teacher performance objectives, or implementation objectives. Such requests will be no more frequent than four times a year.

C. The terms of this agreement shall be in force from the time it is fully executed through June 30, 1973, and will continue thereafter for one year subject to mutual agreement by the parties.

Agreed to:

William R Bush

William R. Bush, Deputy Director
Wisconsin Research and Development Center

Date

Agreed to:

Name

Date

MEMORANDUM OF AGREEMENT

BETWEEN

THE WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

AND

THE _____ SCHOOL DISTRICT (DISTRICT)

The Wisconsin Research and Development Center for Cognitive Learning (Center) and the _____ School District (District) agree during the 1972-73 school year to cooperate in a field test of the Developing Mathematical Processes (DMP) Coordinators Inservice Program, and to implement DMP curriculum products in selected school districts.

A. The Center agrees to:

1. Provide inservice to the DMP Coordinator in a two and one-half day conference in June, 1972.

2. Provide travel and lodging expenses for the DMP Coordinator during the conference.

3. Provide the following materials, (one for each participating adult) for the DMP Coordinator to use in the District:
   "An Activity Approach to Math"
   Project Paper: Topical Outlines, Content and Behavioral Objectives for the DMP Program
   "Assessment and Managing Instruction"
   Topic 2.9 Sampler

4. Provide a one day mid-year inservice session in a mutually convenient site for the DMP Coordinator in January, 1973 at Center Expense.

5. Respond to inquiries from the DMP Coordinator related to the implementation of DMP.

53

6. Provide a complete package of DMP printed materials to the Coordinator as specified in Manual for DMP Coordinators. In addition, provide a sample kit of manipulatives.

B. The District agrees to:

1. Support a DMP Coordinator _____, who will assume the following responsibilities:

   a. Receive inservice training from the Center relative to the implementation of DMP.
   b. Provide DMP inservice training to the district(s).
   c. Support the implementation of the DMP program as prescribed in the Manual for DMP Coordinators.
   d. Respond to inquiries from the district(s) related to the implementation of DMP.
   e. Provide evaluative data to the Center upon request related to the effectiveness of the DMP program. Such data may include DMP Coordinator opinion, teacher performance objectives, or implementation objectives. Such requests will be no more frequent than four times a year.

2. Implement DMP in the following schools: _____

3. Purchase all instructional materials for students and teachers.

4. Implement DMP in the manner prescribed by the DMP Coordinator.

5. Provide evaluative data relative to the effectiveness of the program to the Wisconsin Research and Development Center for Cognitive Learning upon request. Such data may be of the form of student achievement, teacher opinion or administrator opinion. Such requests will be no more frequent than twice a year.

C. The terms of this agreement shall be in force from the time it is fully executed through June 30, 1973, and will continue thereafter for one year subject to mutual agreement by the parties.

Agreed to:

William R Bush

William R. Bush, Deputy Director
Wisconsin Research and Development Center

Date

Agreed to:

Name

Date

MEMORANDUM OF AGREEMENT

BETWEEN

_____

AND

THE _____ SCHOOL DISTRICT (DISTRICT)

The _____ and the _____ School District (District) agree during the 1972-73 school year to cooperate in a field test of the Developing Mathematical Processes (DMP) Coordinators Inservice Program and to implement DMP curriculum products in selected schools.

A. The _____ agrees to select and support a DMP Coordinator and ensure that this Coordinator:

1. Receives inservice training from the Wisconsin Research and Development Center for Cognitive Learning relative to the implementation of DMP.

2. Provides DMP inservice training to the district.

3. Supports the implementation of the DMP program as prescribed in the Manual for DMP Coordinators.

4. Respond to inquiries from the district related to the implementation of DMP.

B. The District agrees to:

1. Implement DMP in the following schools: _____

_____

2. Purchase all instructional materials for students and teachers.

55

3. Implement DMP in the manner prescribed by the DMP Coordinator.

4. Provide evaluative data relative to the effectiveness of the program to the Wisconsin Research and Development Center for Cognitive Learning upon request. Such data may be of the form of student achievement, teacher opinion or administrator opinion. Such requests will be no more frequent than twice a year.

C. The terms of this agreement shall be in force from the time it is fully executed through June 30, 1973, and will continue thereafter for one year subject to mutual agreement by the parties.

Agreed to:

_____
Name

_____
Date

Agreed to:

_____
Name

_____
Date

Appendix B
Program and Participants
Conference for DMP Coordinators - 1972

Program

Conference for DMP Coordinators

June 13-15, 1972

Madison, Wisconsin

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AGENDA

Conference for DMP Coordinators

Wisconsin Research & Development Center
Basement Lounge
June 13 - 15, 1972

TUESDAY, JUNE 13

Registration and Coffee	8:00 - 8:45 AM
Welcome Dr. William Bush, Deputy Director R & D Center	8:45 AM
The Role of the Coordinator Donald Hubbard Douglas McLeod	9:00 AM
Overview of DMP Materials James Moser	9:30 AM
Break	10:00 AM
Psychological Background for DMP Thomas Romberg	10:15 AM
Overview of DMP Levels 1-4 Mary Montgomery Marcia Dana	10:45 AM
Lunch	12:00

Overview of DMP Levels 1-4 (continued) — 1:30 PM
Mary Montgomery and
Marcia Dana

Task Analysis and Behavioral Objectives — 2:30 PM
John Harvey

Break — 3:00 PM

Assessment and IGE — 3:15 PM
Thomas Romberg and
Gwennyth Trice

Summary and Plans for Tomorrow — 4:15 PM
Douglas McLeod

Reception--Hosted by Rand McNally — 5:00 - 6:30 PM
Blue Lounge, Wisconsin Center
702 Landgon Street

WEDNESDAY, JUNE 14

Coffee & Planning Activities for DMP Installation — 8:30 AM

Conducting the Summer Workshop: — 9:00 AM

An Activity Approach to Math
Douglas McLeod

Using DMP Activities and Assessment
Mary Montgomery and
Gwennyth Trice

Questions about the Workshop
Mary Montgomery and
Gwennyth Trice

Lunch — 12:00

Inservice Meetings — 1:30 PM
Bernadette Perham
Douglas McLeod

Common Questions from Teachers — 3:00 PM
Bernadette Perham,
Anne Buchanan and
Ronald Lange

THURSDAY, JUNE 15

Coffee — 8:30 AM

Planning for 1972-73 Field Test — 9:00 AM
Donald Hubbard and
Anne Buchanan

Break — 10:00 AM

The Future of DMP — 10:15 AM
Thomas Romberg

Evaluation of the Conference — 11:15 AM
Thomas Romberg,
Eugene Hobbs and
Donald Zalewski

Closing Remarks — 11:45 AM
Donald Hubbard

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Deputy Director

John Harvey
Principal Investigator

Donald Hubbard
Assistant Scientist

James Moser
Associate Scientist

Thomas Romberg
Principal Investigator

Anne Buchanan
Quality Verfication

Appendix C
Fall Correspondence

WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

UNIVERSITY OF WISCONSIN-MADISON
1404 REGENT STREET
MADISON, WISCONSIN 53706
PHONE 262-4901 / AREA 608

August 16, 1972

Dear DMP Coordinator:

I have been notified, as I assume you have, by Paul Lindquist of Rand McNally that some of the materials necessary for implementation of the DMP program will not be shipped until the first week of September. This would imply that there will be some delay in getting started until these materials arrive. In order to ease the problem of getting started that you and the teachers you will be working with might have, I can suggest some activities that require nothing more than the Teacher's Guide, which should be in the teachers' hands by the beginning of school. You may wish to pass this suggested list along to the teachers at the workshop.

Kindergarten - DMP Level One

This is the area of least concern. Kindergarten teachers usually have a routine for getting going in September that does not necessarily include any formal work in a particular subject area. Nevertheless, here are some suggestions:

Activity 1.1.1, part A
Activity 1.1.2, parts A and B (less the "thing" cards)
Activity 1.1.4, parts A and C
Activity 1.1.6, parts B, B, S.1, S.2

First Grade - DMP Level Two

Activity 2.1.2, parts A and B
Activity 2.1.3, parts A, B, C
Activity 2.2.1
Activity 2.3.2
Activity 2.3.4, parts A, B, C, D; plus any worksheets of teachers' own design that teach the writing of numerals
Activity 2.4.3
Activity 2.4.4
Activity 2.4.6

Second Grade - DMP Levels Two and Three

This is the area of greater concern, because of the fact that so many potential beginning activities require the use of the materials that will not be immediately available. I am suggesting two activities from the last topic in Level Two - Topic 2.11, which deals with recognition and use of the numbers 11-20. Perhaps some previous experiences with these numbers can be reviewed.

Activity 2.11.1, parts B, C, S.1, S.2
Activity 2.11.5, part B
Activity 3.2.1, part A
Activity 3.2.3, parts A, S.1, S.2

I hope this will be of some assistance. I sincerely apologize for the inconvenience that will be caused by the tardy delivery of some of the materials.

Best wishes for a successful year.

Cordially,

James M. Moser
DMP Project Coordinator

WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

UNIVERSITY OF WISCONSIN-MADISON
1404 REGENT STREET
MADISON, WISCONSIN 53706
PHONE 262-4901 / AREA 608

August 23, 1972

M E M O R A N D U M

TO: DMP Coordinators

FROM: Don Hubbard

RE: me

There has been a shift in wind; we have had to reallocate resources in the Center again. The result this time is to shift the responsibility for the DMP Coordinator's field test from me to Mary Montgomery. Our office is concentrating more on the intensive small scale field test. The DMP project staff has assumed the responsibility for the large scale field test in Math. Mary is an author of several of the books and with the recent acquisition of her degree, is acquiring the responsibility for all of DMP's relations with schools. Her address is the same, but her phone number differs --- (608) 262-5866. She will be contacting you shortly.

Thanks for helping the field test off to a good start. Good luck in the years to come.

DH/sm

cc.
Tom A. Romberg
Paul Lindquist

WISCONSIN RESEARCH AND DEVELOPMENT CENTER FOR COGNITIVE LEARNING

THE UNIVERSITY OF WISCONSIN
1404 REGENT STREET
MADISON, WISCONSIN 53706
PHONE 262-4901 / AREA 608

Dear

By now you have received Don Hubbard's letter explaining the switch in responsibilities for the field test of DMP. Hopefully, you have also received enough materials from Rand to begin, have had inservices and are off to a good start. If there is anything we can assist with from here, please call.

As we plan the year there are several points of information that I need to relay to you and some information I need from you.

First, as soon as plans are confirmed here I will let you know about the Midwinter conference for coordinators.

Second, we want to collect some information about your inservices. We will be sending a questionnaire for you and a sample for your teachers.

Third, we would like to receive information about any special programs (PTA, other schools) you or your teachers hold; any press releases or other such information.

Fourth, if the schools administer standardized tests we would like the results for those students using DMP.

Fifth, we will be revising the Coordinators Manual in the spring and will want your suggestions. We will write specifically for this information then, but you may want to make notes as the year progresses.

Sixth, in order to do the sampling of teachers and to have a better picture of how DMP is being used, we have enclosed a form for each school. This form asks for more detailed information than the DMP information sheet that Don sent. If you have not sent his form, this one is sufficient. If we have received it, we are returning a Xerox copy so you can use it in completing the new form.

Thus the only things we need as soon as possible are the information forms. The first and second points we will be corresponding about shortly. The third, fourth and fifth are things that you will need to watch throughout the year and we will ask for later.

I am looking forward to working with you during the coming year.

Sincerely,

Mary E. Montgomery

Mary E. Montgomery
Assistant Scientist

MEM:nve
Enc.

Appendix D
DMP Large Scale Field Test Schools 1972-73

DMP LARGE SCALE FIELD TEST SCHOOLS
1972-73

STATE	SCHOOL	PRINCIPAL	LOCATION	COORDINATOR
CALIFORNIA	Brookhaven ( )*			David Pagni California State College Fullerton 92631
CONNECTICUT	Clover Street (1,14)	Arthur Beckius	57 Clover St. Windsor 06095	John Proctor Windsor Schools 150 Bloomfield Ave. Windsor 06095
	Ellsworth (1, 15)	John Proctor	730 Kennedy Rd. Windsor 06095	John Proctor
	Killingly Memorial (5, 120)	William Hoss	Main & Hutchins St. Danielson 06239	William Hoss Main & Hutchins Danielson 06239
	Laurel Metacomet Vincent Wintonburry		Bloomfield 06002 Bloomfield 06002 Bloomfield 06002 Bloomfield 06002	John Proctor John Proctor John Proctor John Proctor
COLORADO	Fountain (8, 213)	Myron Roberts	916 N. Fountain Pueblo 81001	William Trevithick School District No. 6 102 W. Orman Ave. Pueblo 81004
	Goodnight (7, 240)	Richard Elm	Windy Way & Sage Pueblo 81004	William Trevithick
	Hellbeck (6, 205)	Mrs. Marion Chanick	300 Lakeview Pueblo 81005	William Trevithick
	Irving (4, 135)	Ed Lane	1629 W. 21st Pueblo 81003	William Trevithick
	Jefferson (1, 43)	Steve Hiza	Nuckols & Prairie Ave. Pueblo 81004	

*First number denotes number of teachers; second the number of students

STATE	SCHOOL	PRINCIPAL	LOCATION	COORDINATOR
INDIANA	Walt Disney (10, 228)	John Borland	54777 Filbert Rd. Mishawaka 46544	Daniel Hendershott Penn-Harris-Madison School Corp. 12380 McKinley Hwy. Mishawaka 46544
ILLINOIS	Carrie Busey (7, 137)	Marion Robinson	1605 West Kirby Champaign 61820	Maxine Atkins Champaign Unit 4 Schools Champaign 61820
	Kenwood (13, 325)	John McGinnis	1001 S Stratford Champaign 61820	Maxine Atkins
	Southside (5, 125)	Mary Rhoades	712 S. Pine Champaign 61820	Maxine Atkins
	Westview (4, 100)	Camille Marien	703 South Russell Champaign 61820	Maxine Atkins
MINNESOTA	Birch Lake (7, 265)	Dr. Werner Tismer	2260 Birch Lake White Bear Lake 55110	David L. Dye District 624 Bloom Avenue White Bear Lake 55110
	Garfield (3, 93)	David Strand	Garfield 56332	David L. Dye
NEBRASKA	Kahoa		Lincoln	Ronald Massie Lincoln Public Schools 720 S. 22nd St. Lincoln 68510
	Randolph		Lincoln	Ronald Massie
	Rousseau		Lincoln	Ronald Massie
	West Lincoln		Lincoln	Ronald Massie
NEW JERSEY	Irving (15, 283)	Ron Erikson	11th Avenue Highland Park 08904	Ron Erikson 11th Avenue Highland Park 08904

* First number denotes number of teachers; second the number of students

STATE	SCHOOL	PRINCIPAL	LOCATION	COORDINATOR
NEW YORK	Falconer (10, 239)	James H. Gassman	East Avenue Falconer 14733	Dr. William Schall Dept. of Education 100 S. Elmwood Ave. Buffalo 14202
	St. Marys (5, 115)	Sr. Jane Marie Ludwig	336 Washington Ave. Dunkirk	Dr. William Schall
OHIO	Glendale (11, 166)	Philip Schneider	4746 Glendale Toledo 43614	Dr. Thomas Gibney College of Education U. of Toledo Toledo 43606
	Martin Luther King (1, 28)	Al Mackie	943 Palmwood Toledo 43607	Dr. Thomas Gibney
	Old Orchard (5, 143)	Bruce Kuntz	2402 Cheltenham Toledo 43606	Dr. Thomas Gibney
	Walbridge (9, 254)	Patricia Kennedy	1245 Walbridge Ave. Toledo 43609	Dr. Thomas Gibney
	Washington (9, 263)	Alvin Stephens	514 Palmwood Ave. Toledo 43606	Dr. Thomas Gibney
SOUTH CAROLINA	Seven Oaks (5, 180)		Lexington 5 District	Daniel Sandel Dept. of Education 801 Rutledge Bldg. Columbia 29201
	Lonnie B. Nelson		Richland County Dist. 2	Daniel Sandel
	Ruby Elementary		Chesterfield Co. Dist.	Daniel Sandel
	Berkeley (7, 240)		Berkeley Co. Elementary	Daniel Sandel
	Alice Birney (10, 300)		Charleston School Dist.	Daniel Sandel

* First number denotes number of teachers; second the number of students

STATE	SCHOOL	PRINCIPAL	LOCATION	COORDINATOR
TEXAS	Dunbar (10, 250)	Robert Brown, Jr.	4200 Metropolitan Dallas 75210	Nancy Barker Dallas Independent School District 4200 Metropolitan Dallas 75210
WISCONSIN	Emerson (6, 115)	Terry Witzke	21st and Campbell LaCrosse 54601	Owen Nelson Independent District No. 5 5th and Cass LaCrosse 54601
	Kendall (3, 65)	Richard Neff	Kendall	Owen Nelson
	Summitt (10, 238)	Rosella Christiano	1800 Lake Shore Dr. LaCrosse 54601	Owen Nelson
	Washburn (4, 80)	Hal Dyar	8th and Main LaCrosse 54601	Owen Nelson
	Heyer (3, 110)	William Megna	1209 Heyer Drive Waukesha 53186	Richard Stolsmark Waukesha Public Schools 401 E. Roberta Ave. Waukesha 53186
	Lowell (6, 200)	Charles Burton	140 N. Grandview Blvd. Waukesha 53186	Richard Stolsmark
	Pleasant Hill (3, 120)	Chester Duckert	175 Barker Road Waukesha 53186	Richard Stolsmark
	Sherman (11, 250)	Anthony Farina	1604 N. Sherman Ave. Madison	Margaret Jensen 1604 N. Sherman Ave. Madison

* First number denotes number of teachers; second the number of students

Appendix E
Midwinter Coordinators' Conference

Participants of the Three Midwinter Conferences

Chicago

Coordinators and Representatives

Maxine Atkins	Champaign, Illinois
John Borland	Mishawaka, Indiana
Chris Brahm	Schiller Park, Illinois
Karl Gandt	Harwood Heights, Illinois
Tom Gibney	Toledo, Ohio
Ellen Goll	Parma, Ohio
Margaret Jensen	Madison, Wisconsin
Owen Nelson	LaCrosse, Wisconsin
Bernadette Perham	Chicago, Illinois
Richard Stolsmark	Waukesha, Wisconsin

Visitors

Booker Gardner	Urbana, Illinois

Rand McNally & Company

Bill Butler
Fred Gebarowski
Paul Lindquist

R & D Center

Mary Montgomery

Philadelphia

Coordinators and Representatives

Joe Aieta	Weston, Massachusetts
Ron Erickson	Highland Park, New Jersey
Frances Ferenez	Monessen, Pennsylvania
William Hoss	Danielson, Connecticut
John Proctor	Windsor, Connecticut
Gerhard Roberts	New Hyde Park, New York
Daniel Sandel	Columbia, South Carolina
Bill Schall	Fredonia, New York
Irwin Shanken	Longhorne, Pennsylvania
Fred Stewart	Longhorne, Pennsylvania

Rand McNally & Company

Stuart Jones
Paul Lindquist

R & D Center

Mary Montgomery

Denver

Coordinators and Representatives

Nancy Barker	Dallas, Texas
Gene Collins	Denver, Colorado
David Dye	St. Paul, Minnesota
Myrna Fleckles	San Jose, California
Betty Koleilat	Houston, Texas
Nancy Kotzar	Compton, California
Ron Massie	Lincoln, Nebraska
David Pagni	Fullerton, California
Bill Trevithick	Pueblo, Colorado

Visitors

Margariete Montague	Laramie, Wyoming

Rand McNally & Company

Paul Lindquist

R & D Center

Mary Montgomery

Appendix F
Specific Comments Related to Topics

Specific Comments Related to Topics

Level 1

1.1.1 "This activity has no similarities except possibly eyes. It is confusing to the children as they naturally look for similarities and not differences."

1.1.8 Workbook pages 7, 9: Children have a difficult time knowing what figures to cut.

1.2.4 Workbook pages 13, 14: Why do Mr. Long and Mr. Short wear dresses?

1.2.6 Workbook pages 17, 19: Children have difficulty knowing which are the patterns and which are the figures to be cut.

1.3.3 Workbook page 26: Only the boy with the worm catches a fish! Concept lost because children could not draw a straight line. Others thought the activity went well. (May need note to teacher about children's preciseness.)

1.8.4 Workbook page 53: Children have difficult time connecting kite to tail. Pages 55-56: Pictures too small.

Level 2

2.1.6 Identify R and S.

2.3.5 Your, ours, mine concept is too difficult for the children. (This was mentioned at every meeting.) Activity seemed to be okay if heading of yours, ours, and mine was changed.

2.3.7 Adding machine tape was not wide enough for pictures. (Have seen this work if children are instructed to put paste in the middle and let the pictures extend above and below the tape.)

2.3.8 The star should represent the nickel. Students have difficulty making change at this level.

2.5.2 Trouble with the large washers--if the object weighs one or two large washers then it weighs too many lots-a-links to count or to fit in the balance cup.

2.5.10 Experiment too messy for the average classroom.

Level 2 (Continued)

2.6.3 Some pages are missing, sizes are inconsistent and there are too many different sizes.

2.6.4 Part D. Some confusion about whether to call "it" a figure or a path.

2.7.1 Time sequence pictures are confusing.

Level 3

Intro: Printing error: The equalizing process can be divided out by . . .

3.1 Too much material.

3.1.9 Instructions on back of pictures upside down.

3.1.10 In the preparation, the instructions should be consistent for parts A and C--one place refers to boxes; another to squares.

3.2 What are R and S?

3.2.1 Workbook page 19: Puzzle pieces should be labeled on the inside.

3.3 Topic uses numbers greater than 10; should these be included in preparatory objectives.

3.3.3A Counting chips tend to go in one pocket. (May need to suggest how to shake the box.)

3.3.5 Workbook pages 59-60: Are well done.

3.3.7 Workbook pages 63-67: Counting activities are difficult.

3.3.9 Workbook pages 69-72: Pictures too small.

3.4.3B Suggest using 15-20 counters instead of 30-40.

3.4.9 Workbook pages 89-90: Answer to two problems are wrong.

Appendix G
Spring and Summer Correspondence

the
Wisconsin
Research and Development Center
for Cognitive
Learning

the University of Wisconsin · 1025 West Johnson Street · Madison, Wisconsin 53706 · (608)262 - 4901

April 17, 1973

TO: DMP Coordinators

FROM: Mary E. Montgomery

RE: Midwinter Conferences

Enclosed is a copy of the Midwinter Conference[1] report in which the overall and some specific responses to the questions discussed are given. Again, let me thank each of you for your participation. Hopefully, we can take care of many of your requests.

Also enclosed is a sample of activities[2] from Level 5. These have not been revised for next year, but will give you an idea of the activities at that level. I tried to choose some which would be useful in inservice and some which teachers could try with their students at any time.

Sincerely,

Mary

Mary E. Montgomery
Implementation Coordinator, DMP

Enc.

[1] the report (Ch.IV) of the Midwinter Conferences is included in the body of this report.

[2] the sample of Level 5 activities from a pilot version is not included here, but consisted of parts of the following activities:

- 5.2.7 - an optional activity consisting of puzzle, games and worksheets to practice solving open addition and subtraction sentences.
- 5.3.X - a review activity which introduced arrays and in which the children worked with cards at stations.
- 5.3.5 - an alternate activity which dealt with larger numbers involving money, regrouping and validating.
- 5.5.1 - a regular activity involving experiments with area
- 5.7.2 - an optional geometric activity in which no special DMP material was used.

June 5, 1973

Dear

As we come to the end of the school year let me take this opportunity to thank you and your DMP teachers. We appreciate the role that you are playing in the development of DMP. The information you have provided will be of great assistance in planning the coordinators' training and in revising materials for the commercial version.

We are looking forward to our association with the field test sites next year. We are busy this summer writing the upper levels and training coordinators, but we hope you have a good summer vacation.

Sincerely,

Mary E. Montgomery
Implementation Coordinator, DMP

the Wisconsin Research and Development Center for Cognitive Learning

the University of Wisconsin · 1025 West Johnson Street · Madison, Wisconsin 53706 · (608)262 - 4901

July 12, 1973

MEMO TO: DMP Coordinators

FROM: Mary E. Montgomery

RE: Level 5

Enclosed is a list of things you should know about Level 5 and the table of contents for Level 5.

We are holding two coordinators' conferences this summer - one here and one in Pennsylvania for about 70 people.

I appreciate your response to the last questionnaire and will get you the results. Glancing at the forms, the mastery level was high except in a few extreme cases.

Hope you have had a good summer; if there is anything with which I can help you in getting started this Fall, please let me know.

THINGS YOU SHOULD KNOW ABOUT LEVEL 5

Shipping	1. To reiterate what was said in a letter from Rand McNally and Company, Level 5 will arrive in two parts. The first part (teacher's guide, workbook and textbook) contains Topics 5.1 - 5.5 and the second part contains Topics 5.6 - 5.12. All the physical materials will be sent with the first part.
Textbook	2. There is a textbook consisting of nonconsumable materials for Level 5. The use of the textbook is similar to the use of the workbook. However, at the beginning of each topic there is an introductory page for the children to read. It is not referenced specifically in the topic. Teachers may want to use this page in different ways, but caution them not to give away ideas that the children will discover in the topic.
Labeling of pages	3. The pages in the workbook and textbook are labeled by topic and page number. For example, workbook page 3-11 is the eleventh page in Topic 5.3.
Assessment Component	4. The assessment manual is included in the teacher's guide. The discussion of assessment and management and the directions for Placement Inventory E are in the front matter. The directions for topic inventories are at the end of each topic.
Placement Inventory	5. Placement Inventory E covers Topics 4.6, 5.2 and 5.4. In general, continuing students should be placed, according to their record last year in DMP. For students in Third Grade, new to DMP, we recommend beginning in Topic 5.1 and giving the Placement Inventory near the end of that topic.
Answers for Workbook and Textbook	6. The answers for teachers are provided on copies of the workbook and textbook.
Levels 1-4	7. In the front matter of Level 5 is a description of the content of Levels 1-4 in terms of processes and attributes. You may want to use this in your inservice.

the Wisconsin Research and Development Center for Cognitive Learning

the University of Wisconsin · 1025 West Johnson Street · Madison, Wisconsin 53706 · (608)262 - 4901

August 2, 1973

MEMO TO: DMP Coordinators

FROM: Mary E. Montgomery

RE: Enclosures

As many of you indicated at the Midwinter Conference, the placement inventories were a source of some problems. Enclosed are our recommendations for new schools concerning Placement Inventories A and C. Basically, they consist of giving only parts of the inventory and how to group accordingly.

We recommend that schools continuing in DMP use last year's records to form groups. If any teachers want to give inventories we recommend that they choose only the appropriate parts, i.e., the items from the topics for which they want information.

Enclosed are two copies of the Scope and Sequence Chart[1] for K-6. We have printed a limited amount, but if you need more copies, please let me know.

Enclosed are the results of the questionnaire to which your teachers responded in June.

Enclosed are our thanks for your help this past year and our best wishes for next year in DMP.

1 Not included in Appendix

PLACEMENT INVENTORY A

USES

Plan to administer Placement Inventory A before completing Topic 2.1. This placement inventory is designed to give you information relative to the child's familiarity with the material presented in Level One. If the children were not involved in a kindergarten situation, then you will probably wish to administer all of Placement Inventory A. If, on the other hand, the children have had a kindergarten experience or you would prefer to administer the inventory to a large group (Placement Inventory A normally is administered to no more than 12 children at one time), then you will probably wish to administer only the following items:

Item Number	Topic
15 - 21	1.14 (Representing Numerousness symbolically)
22-24	2.3 (Writing Numbers, 0 - 10)

Children who have indicated that they have not mastered the objectives of Topic 1.14 (items 15-21) by responding correctly to fewer than six items, should probably be grouped together to do portions of this topic before beginning Topic 2.3.

You may wish additional placement information for children who have indicated mastery of the topics assessed by Placement Inventory A. A suggested sequence of testing steps is described below.

Placement Inventory	Topic Number	Item Number
B	2.11	7-10
	2.7	11-18
	2.9	19-27
C	3.1,3.3	29-32
	3.4	36-39
	3.5,3.7	40,42-50

PLACEMENT INVENTORY C

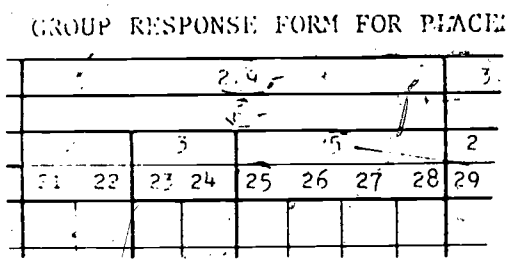
USES

You will probably not wish to administer all of Placement Inventory C at one time. A suggested first set of items is as follows:

Set I: items 21-32, 36-40, 42-50

Plan to administer this set of items from the placement inventory before completing Topic 3.2. Results of this first set of items will give you information about a child's behavior relative to the objectives of Topic 2.9 (Order Sentences), 3.1 and 3.3 (Representing Equalization Situations), 3.4 (Grouping), and 3.5 and 3.7 (Representing and Solving Joining and Separating Situations).

The minimum number of correct items needed to indicate mastery of the objectives of a particular topic is indicated on the group response form as shown here:



Topic Number

Minimum number of correct items needed to indicate mastery

Objective number

Item number

If a child responds correctly to at least this number, he is ready to begin any topic that has the tested topic as its prerequisite. For example, if a child responds correctly to six of the eight items related to Topic 2.9 (items 21-28), then he has indicated mastery of the objectives of Topic 2.9 and may do any topic for which Topic 2.9's objectives are prerequisites.

The items on the inventory are grouped by objectives. You may find that although a child has not responded correctly to the minimum number of items needed to indicate mastery of the objectives of a topic, his errors may be concentrated in one or two of its objectives. For example, if a child responded incorrectly to items 25, 27, and 28 (and, therefore, had only 5 correct items instead of the necessary 6), then you may wish to limit this child to activities related to this objective, Objective 5. Activities that teach toward this objective are listed in the instructional programming section at the beginning of the topic.

This table lists the objectives that are assessed by the suggested first set of items:

Topic	Item		
2.9	21,22	2	Given two objects or sets, chooses an appropriate order sentence.
	23,24	3	Given two objects or sets, writes an appropriate order sentence.
	25-28	5	Given an open order sentence, completes it.
3.1 and 3.3	29	2	Given an equalizing situation involving the numbers 0-10, represents that situation by choosing an appropriate sentence.
	30-32	3	Given an equalizing situation involving the numbers 0-10, represents that situation by writing an appropriate sentence.
3.4	36,37	1	Given a set of objects and instruction to group by a given number, appropriately groups the objects.
	38,39	2	Given a grouped set of objects, represents the grouped objects by writing grouping notation.
3.5 and 3.7	40, 42-45	1	Given a joining or separating situation involving the numbers 0-10, represents that situation by writing an appropriate sentence.
	46-50	3	Given an open sentence involving the numbers 0-10, solves it.

Topics 3.1, 3.3 and Topics 3.5, 3.7 are grouped together because the objectives are preparatory in the first topic and mastery in the second.

FORMATION OF GROUPS

The first segment of Placement Inventory C can identify five groups of children:

1. those who need to do all or part of Topic 2.9
2. those who have indicated mastery of the objectives of Topic 2.9 (and perhaps 3.4 and 3.7, also) but who need to do all or part of Topics 3.1 and 3.3

3. those who have indicated mastery of the objectives of Topics 2.9, 3.1 and 3.3 but who need to do all or part of Topic 3.4

4. those who have indicated mastery of the objectives of Topics 2.9, 3.1 and 3.3, 3.4 but who need to do all or parts of Topics 3.5 and 3.7 and

5. those who have indicated mastery of all the topics assessed by the suggested first segment of the inventory.

Begin by looking at the set of items assessing Topic 2.9, items 21-28. If there are children who have responded correctly to fewer than six items, these children should do all or some of the activities from Topic 2.9, depending on the number or type of errors made, before they begin Topic 3.1.

Next identify the second group of children, those who should do all or parts of Topics 3.1 and 3.3 but who have indicated mastery of Topic 2.9. These are the children who responded correctly to fewer than three items assessing Topics 3.1 and 3.3. Form Groups 3, 4, and Group 5 in a similar manner.

You may wish to form one group consisting of Groups 3 and 4 (and perhaps Group 5); this would be particularly true if the groups were quite small. If you decide to form one group, then you will probably wish to do Topic 3.6 with this group. (The prerequisite for Topic 3.6 is Topic 3.2 and the children would have completed Topic 3.2.) After completing Topic 3.6, regroup for Topics 3.4 and 3.5.

It is important to note that children who have indicated a need to do Topics 3.1 and 3.3 need not do them consecutively, i.e., they may do another topic after completing Topic 3.1 prior to beginning Topic 3.3. The only restriction is that it be one whose prerequisites did not include Topic 3.3. A similar situation occurs with Topic 3.5 and 3.7.

The last group of children formed, Group 5, consisted of those children for whom no placement information was available from the first set of items of Placement Inventory C. Listed below is a suggested sequence of testing steps to follow in obtaining a placement.

Placement Inventory	Topic Number	Item Number
C(Set II)	3.8	3-12
	3.10	33-35, 50-54
D(Part III)	4.2	1-7
	4.4	8, 9
	4.3	10-16
	4.6	17-24
E	5.2	9-13
	5.4	14-28

It is important to note that although a child has indicated he has not mastered the objectives of Topic 2.9, this does not necessarily mean that he has not mastered the objectives of a following topic, Topic 3.4, for example. Therefore, you may find it useful to refer to the results of the placement inventory whenever forming groups for any of the topics assessed by the inventory.

Even if a child has indicated mastery of the regular objectives of a topic, he can still profit from doing activities or parts of activities from that topic. This is especially true if the topic has preparatory or review objectives.

GROUP RESPONSE FORM FOR PLACEMENT INVENTORY C

Topic	2.9								3.1 and 3.3				3.4				3.5 and 3.7									
# Correct for Mastery	6								3				3				7*									
Objective	2		3		5				2		3		1		2		1					3				
Item	21	22	23	24	25	26	27	28	29	30	31	32	36	37	38	39	40	42	43	44	45	46	47	48	49	50
Name:																										

* if all three errors are not related to the same objective

Appendix H
Raw Data

RAW DATA OF KINDERGARTEN COVERAGE AND MASTERY LEVELS

KIND.	LEVEL 1 Topics														LEVEL 2 Topics						No. of Topics Covered	Average Level 1 Mastery
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6		
1	60				60	60	60	60	60	60		60	60	60							10	60
2	72	72	72	72	72		72	72		72		72		72							10	72
3	95	95	95	95	95	95	95	95	95	95	95	95									12	95
4	95	95	95	95	95	95	95	95	95	95	95	95	95	95							14	95
5	90	90	90	90	90	90	90	90	90	90	90	90	90	90							12	90
6	100	100	100	100	100	100	100	100	100	100											10	100
7	96	96	96	96	96	X	X	96	X	96	X	96	96	96							14	96
8	90	90	90	90	90	90	90	90	90	90	90	90	90	90							14	90
9	100	100	100	100	100	100	98	98	98	98	98	98	98	98							14	99
10	95	95	95	90	85	X	X	95	X	95	X	95	100	95							14	94
11	100	100	100	50	✓																5	88
12	80	80	80	80	80	80	80	80	80	80	80	80	80	80							14	80
13	90	90	90	90	90	90	90	90	90	90	90	90	90	90							14	90
14	87	87	87	87	87	87		87	87	87	87	87	87	87							13	87
15	98	90	95	95	85	80	85	90													8	90
16	100	100	98	98	100	100	98	98	100	98	95	98	100	91	91	91	80				14+3	98
17	67	90	33																		3	63
18	90	90	90	90	90	90	90	90	90	90	90	90	90								13	90
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	*						14+11	100
20	50	50	50	50		X		50		50	X	50	50	50							11	50
21	95	95	95	95	95			95		95		95	95	95							11	95
22	80	80	80	80	80	80	80	80	80												9	80
23	100	97	96	90	78	80	70		97					90							9	90
24			90	90				90	90							90	90	90	90		4+4	90
25	90	90	90	90	90			90	90	90	90										4	90
26	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95		95		14+5	95
27	90	90	90	90	90	90	90	90	90	90	90	90	90	90							14	90
28	90	90	90	90	90	90	90	90	90	90	90			90							12	90
29	100	100	100	100	100	100	100	100	100	100	100	100	100	100							14	100
30									100	100	100	100	100	100	100	100	100	100	100	100	6+6	100

RAW DATA OF KINDERGARTEN COVERAGE AND MASTERY LEVELS (cont.)

KIND.	LEVEL 1 Topics														LEVEL 2 Topics						No. of Topics Covered	Average Level 1 Mastery
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6		
31														97	97	97	97	97	97	*	1+11	97
32	92	92	92	92	92	92	92	95	85	85	85	85	85	85		85	X				14+1	89
33	90	90	90	90	90	90		90													7	90
34	90	90	90	90	90	90	90	90	90	90	90										11	90
35	80	80	80	80	80	80	80	80	80	80											10	80
36	100	100	100	100	100	100	100	100	100	100	100	100	100	100							14	100
37	90	90	90	90	90	90	90	90	70	70		90									11	86
38	✓	✓	✓	✓	✓	✓	✓	✓													8	
39	✓	✓	✓	✓	✓																5	
40	90	90	90	90	90	90	90	90	90	90	90	90	90	90							14	90
41	78	78	78	78	78	78	78	78	78	78	78	78	78	78							14	78
42	72	100	100	77	94	100	100	79	91	85	87	85	✓	✓							14	89
43	90	80	80	95	80	80	95	✓	90	✓	95	✓	✓	✓							14	87
44	90	95	86	88	85	89	89	80	80		93	100	✓	✓							13	89
No. of Groups	41	40	41	40	39	35	33	38	34	33	28	29	26	29	5	7	7	4	5	3	*	
Ave. Mastery	89	90	89	88	89	89	89	88	89	88	91	89	90	89								

Key

X partly covered
✓ no mastery level reported

* All topics in Level 2

RAW DATA OF GRADE 1 COVERAGE AND MASTERY LEVELS

GRADE 1	LEVEL 1 Topics														LEVEL 2 Topics											LEVEL 3 Topics								No. of Topics Covered	Average Level 1 Mastery
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8		
1															90	90	90	90	90	90	90	90	90	90	90									11	90
2															92	92	92	92	92	92	92	92	92	92	92									11	92
3															85	85	85	85	85															5	85
4														96	96	96	96	96	96	96	96	96	96	96	96									12	96
5															75	75	75	75	75	75	75	75	75											9	75
6															85	85	85	85	85	85	85	85	85	85	85									11	85
7															80	95	95	85	95	90	90		92	90										9	91
8															95	95	95	95	95	95	95	95	95	95	95									11	95
9															95	95	95	95	95	95	95	95	95	95	95									11	95
10															96	96	96	96	96	96	96	96	96	96	96	85								12	95
11															98	98	98	98	98	X	X	98	98	98	98									11	98
12	95		95					95						95	95	95	95	95	95	95	95	95	95	95	95	95								16	95
13															90	90	90	90	90	90	90	90	90	90	90									11	90
14															51	94	42	21	30	32	62	67	43	80	70									11	54
15															100	100	100	100	100	100	100	100	100	100	100	100	100	95	96	85	100	✓	100	19	99
16															90	90	90	90	90	90	90	90	90	90	90	✓								12	90
17															95	95	95	95	95	95	95	95	95	95	95									11	95
18															95	95	95	95	95	95	95	95	95	95	95									11	95
19															97	97	97	97	97	97	97	97	97	97	97									11	97
20															97	97	97	97	97	97	97	97	97	97	97									11	97
21															97	97	97	97	97	97	97	97	97											9	97
22															95	95	95	95	95		95		95		95	95		95						10	95
23															90	90	90	90	90	90	90	90	90	90	90									11	90
24															90	90	90	90	90	90	90	90	90	90	90		90		90					13	90
25															80	80	80	80	80	80	80	80	80	80	80									11	80
26															100		99	95	91		94		✓											6	96
27																100	100	100	95		100		95		95									7	98
28															90	90	90	90	90	90	90	90	90	90	90									11	90
29															95	95	95	95	95	95	95	95	95	95	95	✓								12	95
30			80	80	80	80						80			80		80	80	80	80	80		80	80	80									14	80

RAW DATA OF GRADE 1 COVERAGE AND MASTERY LEVELS (cont.)

GRADE 1	LEVEL 1 Topics														LEVEL 2 Topics											LEVEL 3 Topics								No. of Topics Covered	Average Level 1 Mastery
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8		
31															100	100	100	100	100	100	100	100	100	100	100	✓		✓						13	100
32															97	97	97	97	97		97	97	97		97	✓		✓						11	97
33															100	100	100	100	100		100	100	100		100	✓								10	100
34								90		90			90		90	90	90	90	90	90	90	90	90	90	90	90	90	✓						17	90
35															85	85	85	85	85	85	85	85	85	85	85	✓		✓						13	85
36															85	85	85	85	85	85	85	85	85	85										10	85
37															95	95	95	95	95	95	95	95	95	95	95									11	95
38															90	90	90		90		90		90		90									7	90
39															90	90	✓	90	90	90	90	90	90	90	90									11	90
40															87	87		87	87	87	87		87	87										8	87
41															83	83	83	83	83	83	83	83	83	83	83									11	83
42	87	87	87	87	87	87	87	87	87	87	87	87	87	87																				14	87
43															83	83	83	83	83	83	83	83	83											9	83
44	80	80	80	80	80	80	80	80	80	80	80	80	80	80																				14	80
45															80	80	80	80	80	80	80	80	80	80										11	80
46															83	95	100	86	78	72	98	99												8	89
47															95	90	100	90	85	80	80	75	80	70	✓									11	85
48															80	80	99	85	80	75	85	85	95	90	85									11	86
49															95	95	95	95	95	95	95	95	95	95	95									11	95
50															85	85	85	85	85	85	85	85	85	85	85	✓								12	85
51									77	77	77	77	77	77	77	77	77	77	77	77	77	77												14	77
No. of Groups	3	2	4	3	3	3	2	4	3	4	3	4	4	5	48	48	48	49	49	45	48	43	46	38	38	12	3	6	2	1	1	1	1		
Ave. Mastery	87	84	85	82	82	82	84	88	81	83	81	83	81	81	90	91	90	89	89	88	90	90	90	90	91	91	93	95	93		85		100			90

Key

X partly covered
✓ no mastery level reported

RAW DATA OF GRADE 2 COVERAGE AND MASTERY LEVELS

GRADE 2	LEVEL 2 Topics											LEVEL 3 Topics										LEVEL 4 Topics							No. of Topics Covered	Average Level 1 Mastery
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7		
1												90	90	90	90	90	90	90	90	90									9	90
2												75	75	75	75	75	75	75	75	75	75			75					10+1	75
3	50	50	50	50	50	50	50	50	50	50	50	50																	11+1	50
4												75	75	75	75	75	75	75	75	75	75			75					10+1	75
5												90	90	90	90	90	90	90	90	90	90			90			90		10+2	90
6							97		97			97	97	97	97	97	97	97	97	97	97								2+10	97
7												95	95	95	95	95	95	95	95	95	95								10	95
8												90	90	90	90	90	90	90	90										8	90
9												80	80	80	80	80	80	80	80	80	80	80	80						10+2	80
10												95	95	95	95	95	95	95	95	95									9	95
11													90	90	95	95	90	90	100	95	✓								9	93
12												80	80	80	80	80	80	80	80	80	80								10	80
13												95	95	95	95	95	95		95										7	95
14												20	25	20	55	55		48	✓										7	37
15												✓	50	30	98	95	✓	60	98	✓	25								10	65
16												80	80	80	80	80	80	80	80	80	80			80					10+1	80
17												85	72	75	72	60	72	50	65	72	70								10	70
18									100	100	100	100	100	94	98	100	100	100	100		100	100	100	100	✓	100			3+9+5	99
19												87	87	87	87	87	87	87	87		87			87					9+1	87
20												90	90	90	90	90	90	90											7	90
21												90	90	90	90	90	90	90											7	90
22												90	90	90	90	90	90	90	90	90	90								10	90
23												100	100	100	100	100		100	100		100								8	100
24												90	90	90	90	90	90	90											7	90
25												95	95	95	95	95	95	95	95	95	95								10	95
26							100		100			100	100	100	100	100	100	100											2+7	100
27												77		77		77		77			77			77					5+1	77
28	95						95					95	95	95	95	95					95								2+6	95
29												70	70	70	70	70		70											6	70
30													95	85	99	90		✓											5	92

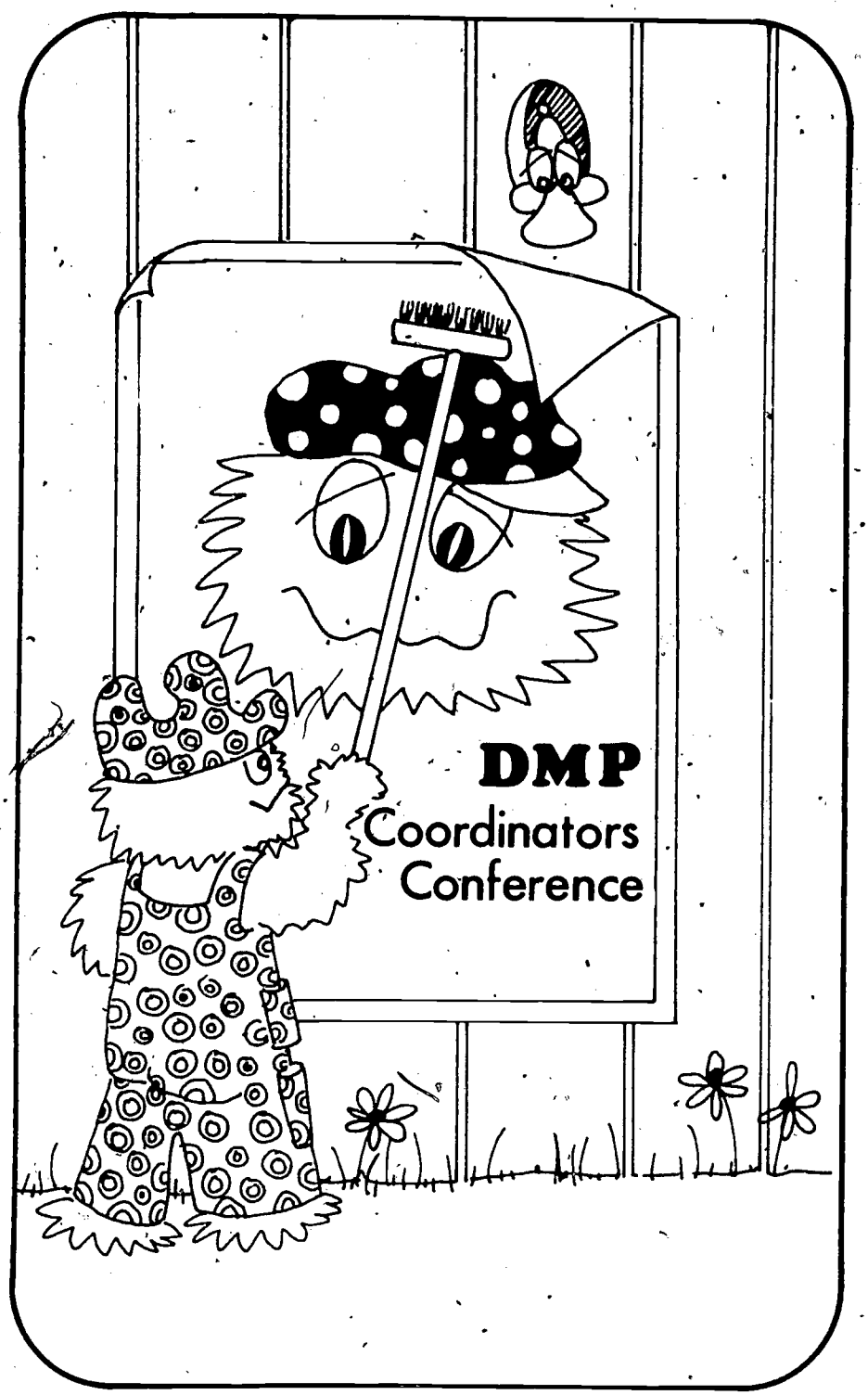
RAW DATA OF GRADE 2 COVERAGE AND MASTERY LEVELS (cont.)

GRADE 2	LEVEL 2 Topics											LEVEL 3 Topics										LEVEL 4 Topics							No. of Topics Covered	Average Level 1 Mastery
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7		
31												73	73	73	73	73	73												6	73
32												80	80	80	80	80	80	80											7	80
33												80	80	80	80	80		80											6	80
34												90	✓	75	90	90	90	90	90	90	90								10	90
35												85	85	85	85	85	85	85	85	85	85								10	85
36												80	80	80	80	80	80	80											7	80
37												80	80	80	80	80	80	80	80	80	80								10	80
38												75	75	75	75	75	75	75	75	75	75								10	75
39												83	83	83	83	83	83	83	83	83	83								10	83
40												67	67	67	67	67	67	67	67	67	67								10	67
41												90	90	90	90	90	90	90	90										8	90
42		60	60			60	60	60	60		60	60		60	60		60	60		60									7+6	60
43					87	87	87	87	87	87	87	87	87	87	87	87	87	87	87										7+8	87
44												83	83	83	83	83	83	83	83	83	83								10	83
45												100	70	30	80	70	100	40	90	95	85								10	76
46												✓	60	33	95	95	✓	50	98	✓	70			40					10+1	73
47												✓	50	90	100	100	✓	90	96	✓	85	100	80	✓					10+3	86
48												100	100	100	100	100	100	100	100	100	100	100	100						10+2	100
49												90	90	90	90	90	90	90	90	90	90	90							10+1	90
No. of groups	2	2	2	1	2	3	6	3	6	3	4	47	46	48	47	47	41	45	35	28	30	5	4	9	1	1	1		460	
Ave. Mastery	73	55	55	50	73	66	87	66	82	79	74	84	82	80	86	85	86	81	88	84	83	94	90	80	✓	100	90		9½	84

Key

X partly covered
✓ no mastery level reported

Appendix I
Programs, Participants, and Evaluations of the 1973 Conferences


DMP
Coordinators
Conference

AGENDA

Conference for DMP Coordinators

Wisconsin Research & Development Center
July 31-August 2, 1973

TUESDAY, JULY 31

8:00 Registration and Coffee

8:30 Welcome and Introduction (John Harvey, DMP staff; William Bush, Deputy Director of R&D Center)

8:45 Role of DMP Coordinators (Mary Montgomery)

9:00 Background of DMP (Mary Montgomery)

9:30 Processes in DMP (Mary Montgomery)

10:00 Break

10:15 A Look at DMP Processes Through Activity (Don Whitaker)

11:00 DMP Materials (Don Whitaker)

12:00 Lunch

1:30 Overview of DMP Content (Mary Montgomery)

1:45 Content of Levels 1-2 (Mary Montgomery)

2:30 Break

2:45 Workshop (Don Whitaker; Mary Montgomery)

4:00 Questions

6:00 Picnic - Hosted by Rand McNally & Company (Brittingham Park)

WEDNESDAY, AUGUST 1

8:00 Coffee and Questions

8:30 Content of Levels 3-4 (Marcia Dana)

9:15 The Activity Approach (Don Whitaker)

10:00 Break

10:15 Assessment and Management (Part 1) (Diana Wearne; Gwen Trice; Mary Montgomery)

11:45 Small-Scale Field Test Results (Don Hubbard)

12:00 Lunch

1:30 Inservice for Teachers (Mary Montgomery)

2:30 Break

2:45 Content of Level 5 (Marcia Dana)

3:15 Workshop (Don Whitaker; Marcia Dana; Mary Montgomery)

4:15 Questions

THURSDAY, AUGUST 2

8:00 Coffee and Questions

8:30 Assessment and Management (Part 2) (Gwen Trice; Mary Montgomery)

9:45 Evaluation of DMP (Tom Romberg)

10:15 Break

10:30 DMP in the Future (Jim Moser)

11:00 Responsibilities of Coordinators and Questions (Mary Montgomery)

11:30 Evaluation of Conference (Don Whitaker)

AGENDA

Conference for DMP Coordinators
Harrisburg, Pennsylvania

Wisconsin Research & Development Center
August 14-August 16, 1973

TUESDAY, AUGUST 14

8:00 Registration

8:30 Welcome and Introduction (Mary Montgomery, Paul Lindquist, Rand McNally & Company)

8:45 Role of DMP Coordinators (Mary Montgomery)

9:00 Background of DMP (Don Whitaker)

9:30 Processes in DMP (Mary Montgomery)

10:00 Break

10:15 A Look at DMP Processes Through Activity (Don Whitaker)

11:00 DMP Materials (Don Whitaker)

12:00 Lunch

1:30 Overview of DMP Content (Mary Montgomery)

1:45 Content of Levels 1-2 (Mary Montgomery)

2:30 Break

2:45 Workshop (Don Whitaker, Mary Montgomery, Dan Sandel)

4:00 Questions

5:30 Reception - Hosted by Rand McNally & Company (Meeting Room A)

WEDNESDAY, AUGUST 15

8:00 Coffee and Questions

8:30 Content of Levels 3-4 (Mary Montgomery)

9:15 The Activity Approach (Don Whitaker)

10:00 Break

10:15 Assessment and Management (Part 1) (Don Whitaker, Mary Montgomery)

12:00 Lunch

1:30 Inservice for Teachers (Mary Montgomery, Dan Sandel)

2:30 Break

2:45 Content of Level 5 (Mary Montgomery)

3:15 Workshop (Don Whitaker, Mary Montgomery)

4:15 Questions

THURSDAY, AUGUST 16

8:00 Coffee and Questions

8:30 Assessment and Management (Part 2) (Don Whitaker, Mary Montgomery)

9:45 Evaluation of DMP (Don Whitaker)

10:15 Break

10:30 DMP in the Future (Paul Lindquist)

11:00 Responsibilities of Coordinators and Questions (Mary Montgomery, Dan Sandel)

11:30 Evaluation of Conference (Don Whitaker)

SUMMARY OF EVALUATIONS OF 1973
DMP COORDINATOR CONFERENCE

To help us evaluate the DMP Coordinator Conference and to help us plan future conferences, we would appreciate your responses to the items below:

				No Comment
1.	Did we provide adequate information covering the conference in our communication prior to it?	Yes 60	No ___	___
	Comments:			
2.	Did the conference provide adequate coverage of the following?			
	A. Background of DMP	Yes 58	No 2	___
	B. Processes in DMP	Yes 57	No 1	2
	C. The activity approach	Yes 57	No 2	1
	D. The measurement approach	Yes 49	No 7	4
	E. Use of DMP materials			
	1. Teacher's Guide	Yes 57	No 3	___
	2. Printed materials	Yes 54	No 5	1
	3. Pupil Workbooks, Textbooks, Test Booklets	Yes 51	No 8	1
	4. Physical Materials	Yes 55	No 4	1
	F. Assessment and management procedures			
	1. Placement inventories	Yes 56	No 2	2
	2. Topic inventories	Yes 54	No 3	3

				No Comment
3.	Observation schedules	Yes 49	No 7	4
4.	Record keeping	Yes 52	No 5	3
5.	Managing within topics	Yes 48	No 10	2
6.	Grouping	Yes 48	No 10	2
G.	An overview of DMP content	Yes 59	No 1	
H.	Content and use of Levels 1 - 2	Yes 59	No 1	
I.	Content and use of Levels 3 - 4	Yes 60	No	
J.	Content and use of Level 5	Yes 57	No 2	1
K.	DMP field test results	Yes 48	No 10	2

Comments:

Some participants wanted more information on the field test results.

3.	Did the workshop clarify your role in the implementation of DMP?	Yes 59	No	1
4.	Did the workshop provide adequate information concerning coordinator responsibilities in the following areas?			
A.	Purpose of workshops for teachers	Yes 58	No	2
B.	Schedule of workshops for teachers	Yes 55	No 2	3
C.	Schedule of inservice meetings for teachers	Yes 51	No 6	3
5.	Have you been able to arrange the planning activities listed below which are suggested on pages 5 and 6 in the Coordinator's Manual?			
A.	Meeting to promote teacher awareness (spring)	Yes 33	No 20	7
B.	Funding for DMP implementation	Yes 41	No 11	8
C.	Scheduling inservice meetings	Yes 32	No 20	8
D.	Arranging facilities for workshops	Yes 37	No 16	7
E.	Ordering materials	Yes 43	No 9	8

If you have been unable to arrange any of the above activities or have had problems in doing so, please comment:

Several individuals felt that this section was not applicable in their situation; others had not made an attempt to arrange any of these activities.

6. Do you anticipate any difficulties in completing the activities listed below?

			No Comment
A. Arranging summer or fall workshop for teachers	Yes 3	No 53	4
B. Conducting regular inservice meetings	Yes 7	No 50	3
C. Visiting DMP classrooms	Yes 8	No 49	3
D. Organizing a mid-year workshop	Yes 5	No 53	2

Comments:

7. Do you know who to contact if you need further information? Yes 59 No 1 ___

8. Did the workshop answer all of the questions which you had? Yes 50 No 10 ___

If it didn't please list your remaining questions below:

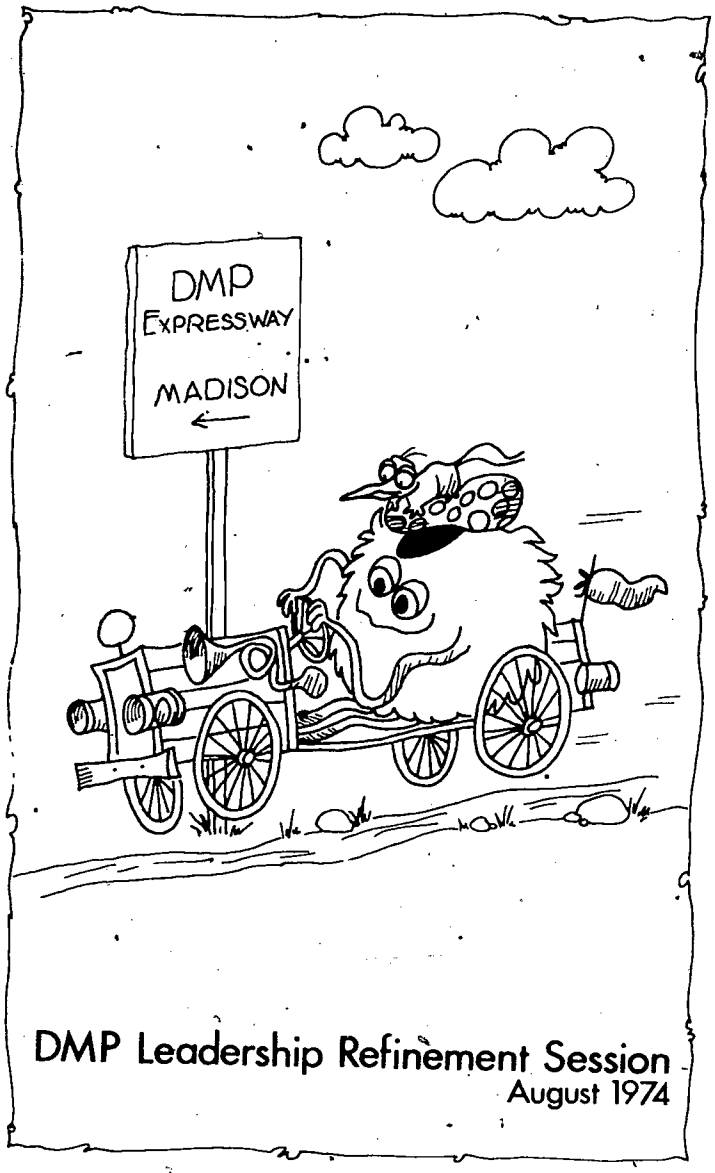
A few participants remarked that only experience in working with DMP could answer all their questions. One wanted more data for informing parents about the program; another wanted a comparison of DMP with existing commercial programs.

9. Did the workshop meet your expectations? Yes 59 No 1 ___

Please comment:

Comments were very favorable, indicating that the conference was well organized, extremely beneficial, and included an appropriate balance of lecture and activity. Several participants complimented the workshop leaders on their competence and helpfulness. It was suggested that films are needed to aid in presentations on DMP and that more assessment information should be provided during the conference. One individual felt that teachers who have used the program should be included in the conference.

Appendix J
Programs, Participants, and Evaluations of the 1974 Conferences



AGENDA

DMP LEADERSHIP REFINEMENT SESSION

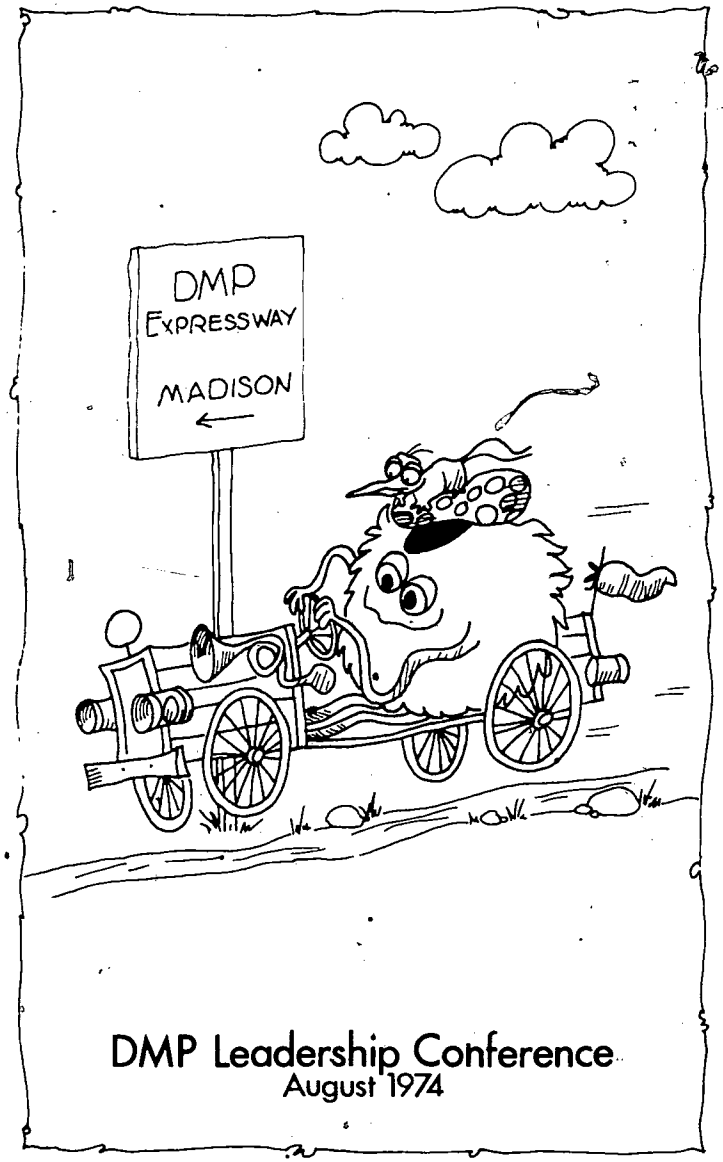
Wisconsin Research and Development Center
August 5-6, 1974

MONDAY, AUGUST 5

8:30	Coffee and Reacquaintance
9:00	Coordinator's Manual Revised (Mary Montgomery)
9:15	A Look at the Commercial Version K-2 (Jim Moser)
10:30	Break
10:45	Content of DMP Levels 5 and 6 (Marcia Dana)
11:45	Questions
12:00	Lunch
1:30	Activities for Awareness (Mary Montgomery, Don Whitaker, Paul Lindquist)
2:30	Break
2:45	Planning Awareness Sessions (Mary Montgomery, Don Whitaker, Paul Lindquist)
3:45	Questions
4:00	Video Viewings (optional)

TUESDAY, AUGUST 6

8:00	Coffee and Questions
8:30	Assessment and Management (Mary Montgomery)
9:30	Discussion of Awareness Session (Don Whitaker)
10:30	Break
10:45	How to Begin DMP in the Commercial Version (Don Whitaker)
11:00	New Developments in DMP (Jim Moser, Paul Lindquist)
11:45	Evaluation of Coordinator's Manual (Don Whitaker)
12:00	Adjournment



AGENDA

DMP LEADERSHIP CONFERENCE

Wisconsin Research and Development Center
August 7-9, 1974

WEDNESDAY, AUGUST 7

8:00	Registration and Coffee
8:30	Welcome and Introduction (Tom Romberg, DMP Staff; Dick Rossmiller, Director of R&D Center)
8:45	Role of DMP Coordinators and Consultants (Mary Montgomery, Paul Lindquist)
9:00	Background of DMP (Don Whitaker)
9:30	DMP Processes (Mary Montgomery)
10:00	Break
10:15	A Look at DMP Processes Through Activity (Don Whitaker)
11:00	DMP Materials (Jim Moser)
12:00	Lunch
1:30	Overview of DMP Content (Don Whitaker)
1:45	Arithmetic Content of Topics 1-40 (Mary Montgomery)
2:30	Break
2:45	Geometric Content of Topics 1-40 (Mary Montgomery)
3:15	Workshop (Don Whitaker, Mary Montgomery)
4:00	Questions
6:00	Picnic (Hosted by Rand McNally at Brittingham Park)

THURSDAY, AUGUST 8

8:00 Coffee and Questions

8:30 Content of Developmental Levels 5 & 6 (Marcia Dana)

9:30 Activity Approach (Don Whitaker)

10:00 Break

10:15 Activity Approach (Don Whitaker)

10:45 Assessment (Mary Montgomery)

12:00 Lunch

Afternoon Session for Coordinators

1:30 Inservice for Teachers (Don Whitaker)

2:30 Break

2:45 How to Begin in the Fall (Don Whitaker)

3:15 Workshop: Planning Inservice Sessions (Don Whitaker)

4:15 Questions (Viewing of video tapes)

Afternoon Session for Consultants

1:30 Activities for Awareness (Mary Montgomery)

2:30 Break

2:45 Workshop: Planning DMP Awareness Sessions (Mary Montgomery)

4:15 Questions (Viewing of video tapes)

FRIDAY, AUGUST 9

8:00 Coffee and Questions

8:30 Coordinators: Classroom Management (Mary Montgomery)

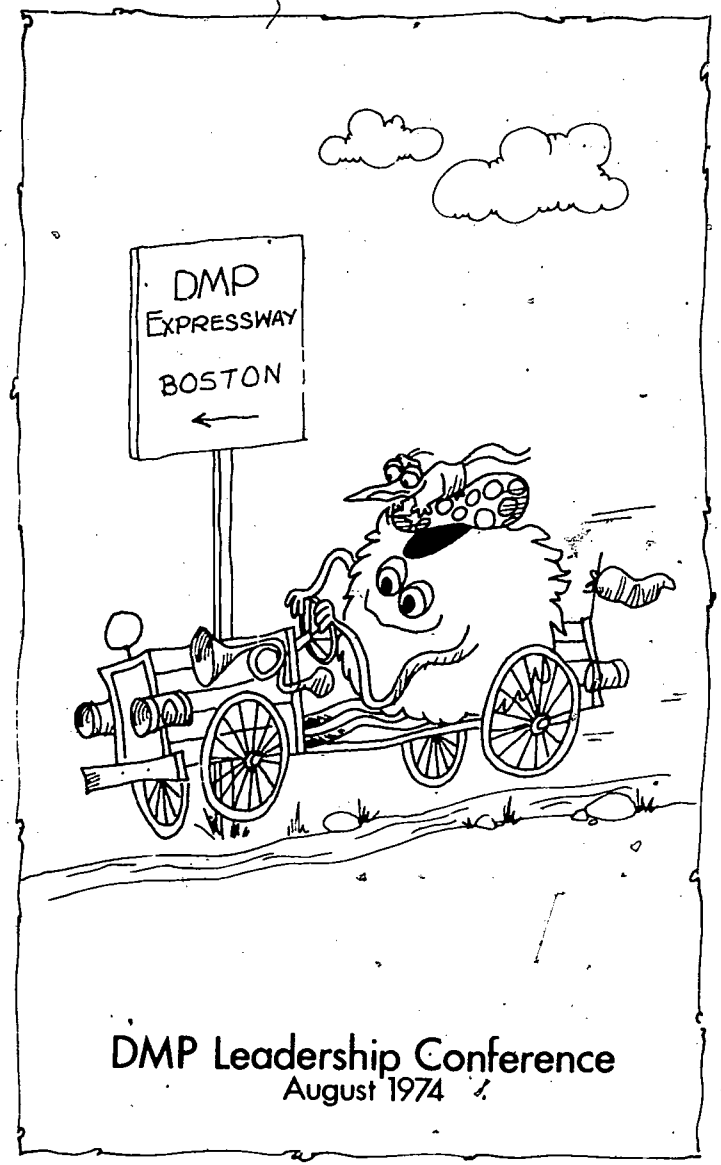
Consultants: Group Presentations of Proposed Awareness Sessions (Don Whitaker)

10:00 Break

10:15 DMP in the Future (Jim Moser)

11:00 Evaluation of Conference (Don Whitaker)

11:15 Additional Questions



AGENDA

DMP LEADERSHIP CONFERENCE

Boston Holiday Inn - Government Square
August 21-23, 1974

WEDNESDAY, AUGUST 21

8:00	Registration
8:30	Welcome and Introductions (Don Whitaker, Paul Lindquist)
8:45	Role of DMP Coordinators and Consultants (Mary Montgomery, Paul Lindquist)
9:00	Background of DMP (Don Whitaker)
9:30	DMP Processes (Mary Montgomery)
10:00	Break
10:15	A Look at DMP Processes Through Activity (Mary Montgomery, Don Whitaker, Bill Schall)
11:00	DMP Materials (Don Whitaker, Paul Lindquist)
12:00	Lunch
1:30	Overview of DMP Content (Mary Montgomery)
1:45	Arithmetic Content of Topics 1-40 (Mary Montgomery)
2:30	Break
2:45	Geometric Content of Topics 1-40 (Mary Montgomery)
3:15	Workshop (Don Whitaker, Mary Montgomery, Bill Schall)
4:00	Questions
6:00	Reception - Hosted by Rand McNally

THURSDAY, AUGUST 22

8:00 Questions

8:30 Content of Developmental Levels 5 & 6 (Mary Montgomery)

9:30 Activity Approach (Bill Schall)

10:00 Break

10:15 Activity Approach (Bill Schall)

10:45 Assessment (Mary Montgomery)

12:00 Lunch

Afternoon Session for Coordinators

1:30 Inservice for Teachers (Bill Schall)

2:30 Break

2:45 How to Begin in the Fall (Bill Schall)

3:15 Workshop: Planning Inservice Sessions (Bill Schall)

4:15 Questions

Afternoon Session for Consultants

1:30 Activities for Awareness (Mary Montgomery)

2:30 Break

2:45 Workshop: Planning DMP Awareness Sessions (Mary Montgomery)

4:15 Questions

FRIDAY, AUGUST 23

8:00 Questions

8:30 Coordinators: Management (Mary Montgomery)

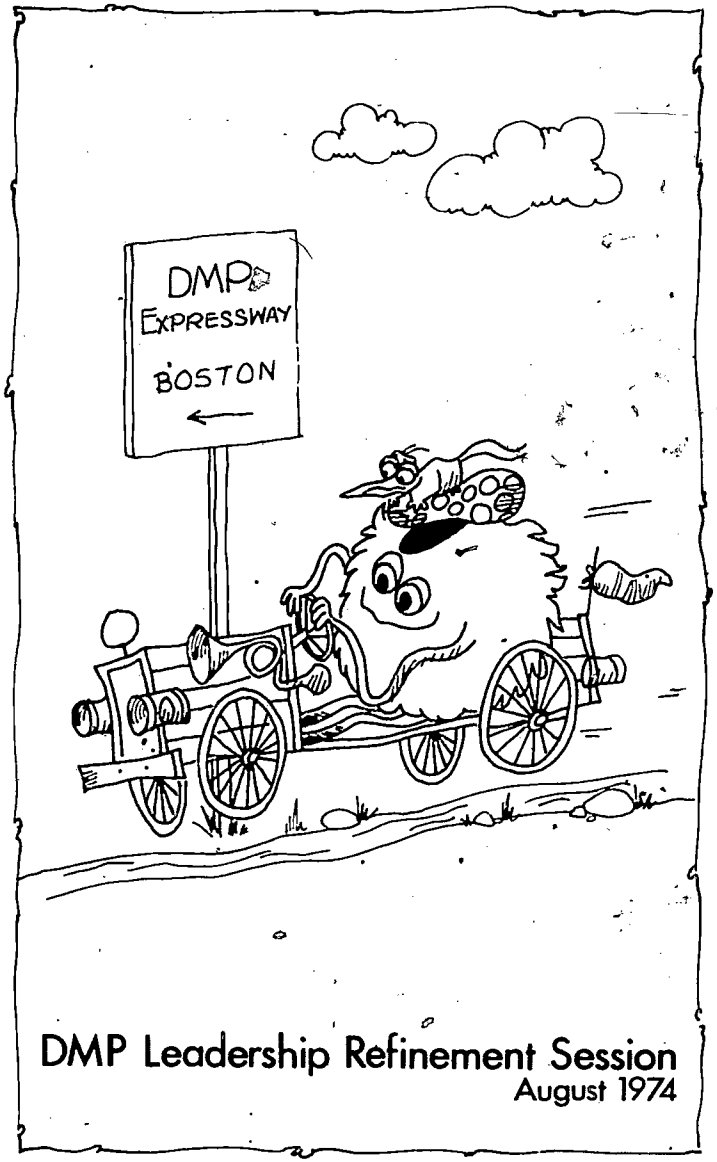
Consultants: Group Presentations of Proposed Awareness Sessions (Bill Schall)

10:00 Break

10:15 DMP in the Future (Mary Montgomery)

11:00 Evaluation of Conference (Bill Schall)

11:15 Additional Questions



AGENDA

DMP LEADERSHIP REFINEMENT SESSION

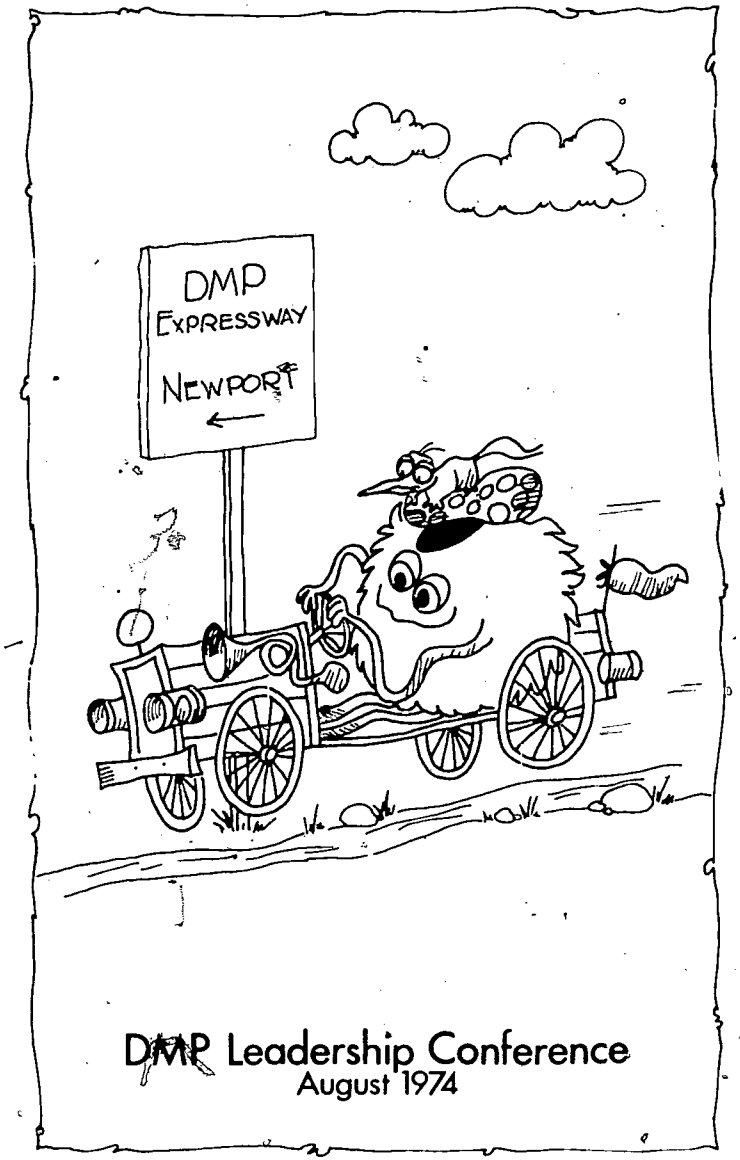
Boston Holiday Inn-Government Square
August 19-20, 1974

MONDAY, AUGUST 19

8:30	Coffee and Reacquaintance
9:00	Coordinator's Manual Revised (Bill Schall)
9:15	A Look at the Commercial Version K-2 (Paul Lindquist)
10:30	Break
10:45	Content of DMP Levels 5 and 6 (Mary Montgomery)
11:45	Questions
12:00	Lunch
1:30	Activities for Awareness (Mary Montgomery, Don Whitaker, Bill Schall)
2:30	Break
2:45	Planning Awareness Sessions (Mary Montgomery, Don Whitaker, Paul Lindquist, Bill Schall)
3:45	Questions

TUESDAY, AUGUST 20

8:00	Coffee and Questions
8:30	Assessment and Management (Mary Montgomery)
9:30	Group Presentations of Proposed Awareness Session (Don Whitaker, Bill Schall)
10:30	Break
10:45	How to Begin DMP in the Commercial Version (Don Whitaker)
11:00	New Developments in DMP (Mary Montgomery, Paul Lindquist)
11:45	Evaluation of Coordinator's Manual (Bill Schall)
12:00	Adjournment



AGENDA

DMP LEADERSHIP CONFERENCE

Newport Beach, California
August 28-29, 1974

WEDNESDAY, AUGUST 28

9:00	Welcome and Introductions
9:15	Background of DMP
9:45	DMP Processes
10:15	Break
10:30	A Look at DMP Processes Through Activity
11:15	Materials
12:00	Lunch
1:15	Activity from Kindergarten Material
1:45	DMP Content - Topics 1-40
2:30	Break
2:45	Workshop
4:00	DMP Content - Topics 41-64
5:30	Tea (Hosted by Rand McNally)

THURSDAY, AUGUST 29

9:00	Assessment
10:00	Activity Approach
10:30	Break
10:45	Management
11:30	How to Begin DMP
12:00	Lunch
1:15	Inservice for Teachers and Awareness Sessions
2:00	Planning Time
3:00	Presentations and Discussion

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SUMMARY OF EVALUATIONS OF 1974
DMP LEADERSHIP CONFERENCE

To help us evaluate the DMP Leadership Conference and to help us plan future conferences, we would appreciate your responses to the items below:

				No response	Not applicable
1.	Did we provide adequate information covering the conference in our communication prior to it?	Yes 57	No ___	___	___

Comments:

2.	Did the conference provide adequate coverage of the following?				
	A. Background of DMP	Yes 57	No ___	___	___
	B. Processes in DMP	Yes 57	No ___	___	___
	C. The activity approach	Yes 56	No 1	___	___
	D. The measurement approach	Yes 55	No 2	___	___
	E. Use of DMP materials	Yes 52	No 4	___	1
	F. Assessment and management procedures	Yes 42	No 15	___	___
	G. An overview of DMP content	Yes 50	No 7	___	___
	H. Content and use of Levels K-2	Yes 52	No 4	___	___
	I. Content of upper units	Yes 41	No 16	___	___

Comments:

Several participants expressed a desire for more time spent on coverage of management procedures and on content of the upper units.

3.	Did the conference clarify your role in the implementation of DMP?	Yes 53	No 3	___	1

Note: This page was omitted as not applicable by 30 of the participants who had been designated as consultants rather than coordinators.

				No response	Not Applicable
4.	Did the conference provide adequate information concerning coordinator responsibilities in the following areas?				
	A. Purpose of workshop for teachers	Yes 26	No ___	1	___
	B. Schedule of workshops for teachers	Yes 24	No 1	2	___
	C. Schedule of inservice meetings for teachers	Yes 23	No 2	2	___
5.	Have you been able to arrange the planning activities listed below which are suggested in the Coordinator's Manual?				
	A. Meeting to promote teacher awareness (spring)	Yes 15	No 6	6	___
	B. Funding for DMP implementation	Yes 12	No 7	8	___
	C. Scheduling inservice meetings	Yes 16	No 5	7	___
	D. Arranging facilities for workshops	Yes 14	No 4	8	___
	E. Ordering materials	Yes 14	No 4	8	___

If you have been unable to arrange any of the above activities or have had problems in doing so, please comment:

Several respondents remarked that these tasks were not their responsibility.

6.	Do you anticipate any difficulties in completing the activities listed below?				
	A. Arranging summer or fall workshop for teachers	Yes 5	No 20	2	___
	B. Conducting regular inservice meetings	Yes 3	No 21	3	___
	C. Visiting DMP classrooms	Yes 6	No 17	4	___
	D. Organizing a mid-year workshop	Yes 3	No 19	5	___

Comments:

Some participants commented that there were no DMP classrooms in their regions of the country.

7. Do you know who to contact if you need further information? Yes 57 No 0

8. Did the conference answer all of the questions which you had? Yes 49 No 8

If it didn't please list your remaining questions below:

Several participants expressed a need for time for individual study of the materials before being able to ask additional questions. Others had remaining questions on assessment and the content of the upper levels.

9. Did the conference meet your expectations? Yes 55 No 2

Please comment:

Most participants were very positive in their overall evaluation of the conference. Among the typical comments were the following:

"Good conference - very thorough."

" A well managed and organized conference - one of the best I've attended."

"The conference provided a varied pace and blend of activity, philosophy and mathematical content - good leaders!"

One individual expressed a desire for a follow-up session for consultants.

Appendix K
Awareness Agendas Developed by the 1974 Conference Attendees

DMP AWARENESS AGENDAS

Teachers (30 for one hour)

Setting for the presentation

A display of the materials used in the DMP program. This should be displayed in the area of the presentation.

Presentation

1 - Small group

A series of involvement activities which use a single set of materials. (Recommend geometry pieces with the activity entitled "Pairs." The individual components of this activity should be placed on separate cards and one placed at each work station) 10-15 minutes

2 - Large group presentation

a. Have space prepared to list DMP Processes (T-6)

b. Purpose of this step is to correlate teachers' actions to the processes of DMP and lead into a presentation of the philosophy of DMP. (Hand out the document similar to draft of DMP Philosophy, Chapter 2) 20-30 minutes

c. Total DMP package
(Use Transparency T2)
15 minutes

3 - Questions

Be prepared to discuss
- Assessment
- Record Keeping
- Cost and funds
- List of Topics with Scope and Sequence Chart
- How does this program differ from local programs

TEACHERS (8-30 for 30-60 minutes)

Establish:

1. Credibility of program - history, background, basis of program, soundness
   (Mention Romberg and leaders of project)
2. Materials Kit - teacher and student materials laid out.
   What teacher and student tools are like; management, assessment, instruction
   Program is fun - awareness of
   Must be sold on the program
3. Advantages of a structured sequential program (teachers for years have made own materials, but now have this well done for them)
4. Substance and content of the program
   (attributes - processes)

HANDS-ON time and presentation by leader

MIXED GROUP ($2\frac{1}{2}$ hour)

Suggested Agenda:

History of DMP

Philosophy of DMP

Processes

Activities

Break

Content in K-2

Activity

Sampler (Teacher's Guide)

Questions — Things to Mention

1. How developed
2. Math. Treatment
   - More than arithmetic
   - Very intuitive
   - Very childlike
3. Strong emphasis on problem solving
4. Careful movement from concrete to abstract
5. Activity approach
6. Motivational level for students
7. Individualizing for students
8. Integration with other subjects
9. Flexibility for use within classroom
10. Individualized for teachers

Note: Activities can reinforce the presentation or provide a basis for the presentation.

(60 People - $2\frac{1}{2}$ Hours)

GENERAL PLAN

1. Group Activity (everyone participating in same activity)

   Use of materials (versatility) — 20 minutes

2. Overview of DMP - how it approaches math.

   film as possibility — 30 minutes

3. Flow Chart and Spiral Approach

   Content and classroom management

   Go through Topic Activity. Mention assessment — 30 minutes

4. Activity tied in with above activity — 20 minutes

5. Material description — 10 minutes

6. Question and answer

   (have points to be covered in mind if not brought up) — 30 minutes

7. Activity, if time — 10 minutes

MIXED GROUP (30 for 1 day)

(Have materials out during entire session. Let them handle the materials)

9:00 AM	Activity
10:00 AM	Film and discussion
10:30 AM	Break
10:45 AM	Processes and attributes: length, numerousness, weight, capacity
11:15 AM	Printed matter (Slide series)
12:00 N	Lunch
1:30 PM	Looking at physical materials (stations)
2:30 PM	Discuss possibilities and differences from other programs
3:00 PM	Break
3:15 PM	Directed Questions
3:45 PM	Other questions

Activity Chips

DESCRIBING AND CLASSIFYING: ALIKE AND DIFFERENT SETS

COMPARING SETS: MEASURING THINGS, SAME OR DIFFERENT

ORDERING: WHICH IS MORE, WHICH IS LESS

EQUALIZING: MAKE SETS EQUAL (TWO POSSIBILITIES)

JOINING AND SEPARATING SETS

GROUPING: PASS OUT

PARTITIONING: HOW MUCH OF WHOLE DID EACH

ONE-HOUR WORKSHOP

I	Activity (Measurement)	15-20 minutes
II	Relate activity to philosophy of DMP. Question participants about the activity. Example: How were you involved? What was the atmosphere of the class? What was the role of the teacher? Use T1 to draw together responses of participants.	5-10 minutes
III	Overview processes (use T6) Relate to activity and responses of participants.	10 minutes
IV	Overview content (use T7)	5-10 minutes
V	Evaluation processes (use T5 and T4)	5-10 minutes
VI	Overview of what is provided (use T2) MATERIALS: Physical, Printed, Student, Teacher MANAGEMENT (if time)	5 minutes
VII	A. Questions B. Film - optional as follow up	12 minutes

PARENTS PRESENTATION

1. Play the game of "Do You Remember":
   A. when you had to work 50 long division problems for homework - if you missed 2 you had to work 50 more?
   B. when you were "turned off" in mathematics?

2. Present an activity to the group -
   A. Ask group to state process or concept in which they were involved.
   B. Explain that this activity was just as valid as using the "Purple Plague" for drill and reinforcement and would you believe the child enjoyed doing it? Mathematics does not have to be drudgery!!! Why not make learning enjoyable?
   C. Question to parents - "Did the noise and activities of the other groups in the room bother you?" (Usually the answer is "No.") Doesn't this show that more than one activity can take place in a classroom, without bothering participants?

3. A thorough explanation of the philosophy of the new program, goals and organization of the program should then take place.

4. Parents should then be allowed to participate in multiple activities previously placed at stations throughout the room. These should support your presentation of the overview of the program.

5. Group should reconvene for a question and answer period.

PARENTS (1/2 hour to 1 hour)

Selling presentation to justify the direction Math Selection Committee is taking:

A. Have 6 stations set up with equipment for Cards A-F in Sampler Kit.

NO DIRECTION SHEETS AT THIS TIME

Parents will have a chance to "nose" around as they come into PTA meeting. After business meeting be prepared to take over from 1/2 to 1 hour.

B. Introduce yourself with giving out some gimmick to send parents to 6 stations. As they disperse pass out direction sheets for individual stations.

This may take only 3 or 4 minutes at each station so that all parents rotate to all stations.

C. When parents reassemble (after activity involvement) the remainder of the time is spent on:

1. Illustrating content by what parents did.
2. Show how many activities can happen at one time freeing teacher to give individual group attention.
3. List all of the materials used for CONCRETE - to ABSTRACT methodology.
4. Evaluate each group by individual assessment sheets and show how teachers will have individual sheets for each student.
5. Ask - Did you learn anything?
6. Provide time for questions if there still are any.

PARENTS

Suggestions for Informing Parents about DMP

1. PTA meeting for all parents
2. "Coffees" - observe children; then
   do activities with children
   - get together for questions and answers with principal, teachers, and/or supervisor
3. Workshop for parents
   - in evenings (3 or 4 weeks)
   - during day
4. At Kindergarten round-up inform parents
5. Parent conferences

Agenda for a DMP Night (PTA Meeting)

1. Divide parents into small groups by levels of DMP (have teachers conduct sample activities for that level).

or

2. Divide group for kinds of activities: e.g., games, stories, station approach (using different materials), geometry, number activities

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